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UNIVERSITY OF ILLINOIS
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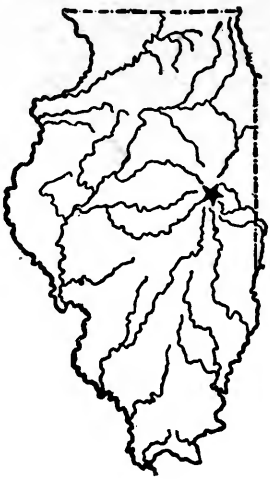
BULLETIN No. 322

SWINE TYPE STUDIES
II. TYPE IN SWINE AS RELATED TO QUALITY OF PORK

By Sleeter Bull and J. H. Longwell



URBANA, ILLINOIS, MAY, 1929

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THIS series of bulletins on SWINE TYPE STUDIES includes the following:

I. TYPE IN SWINE AS RELATED TO RATE AND ECONOMY OF GAIN (*Bulletin 321*).

II. TYPE IN SWINE AS RELATED TO QUALITY OF PORK (*Bulletin 322*).

III. THE ENERGY AND PROTEIN REQUIREMENTS OF GROWING SWINE AND THE UTILIZATION OF FEED ENERGY IN GROWTH (*Bulletin 323*).

TYPE IN SWINE AS RELATED TO QUALITY OF PORK

By Sleeter Bull and J. H. Longwell[1]

INTRODUCTION

The question of type has been of paramount importance in the minds of progressive hog breeders for many years. In the earlier part of the present century the prevailing type of lard hog was a small, broad, short, low-set, blocky animal which had plenty of quality, matured early and supplied plenty of lard. The carcass produced by this Chuffy type is shown in Fig. 14. This type lacked constitution and prolificacy. Constructive breeders soon realized the imperfections of the Chuffy type and began to breed for greater height, length, and size. In a few years many breeders were producing a type with extreme length, height, and size, which had very long legs and neck, was very narrow, and lacked quality generally. A typical carcass of this Rangy type is shown in Fig. 14.

In the meantime a marked change took place in the market demands for pork. The pork consumer demanded smaller and leaner chops, hams, and breakfast bacon. In order to supply this demand, the packer trimmed more and more fat from the cuts, thereby increasing the lard yield from the carcass. In the meantime the price of lard decreased to the point where the trimming represented a distinct financial loss that had to be borne by the more popular cuts of the carcass.

These points were brought out forcibly in an address delivered by Mr. Oscar Mayer, President of the Institute of American Meat Packers, before the National Live Stock Producers in January, 1928. Mr. Mayer, in part, said:

"A problem of vital interest relates to the production of the type of animal that is best suited to the demand of consumers. It obviously is wasteful to produce an animal which does not meet fully the market demand. Let us examine the status of the contemporary American hog and the lard he produces.

"The development of the hydrogenation process has permitted the production in enormous quantities of vegetable substitutes for animal fats, chiefly lard. These vegetable fats—such as cottonseed oil, cocoanut oil, palm oil, olive oil, soybean oil, etc.—are produced cheaply, and some are shipped in increasing volume in world commerce.

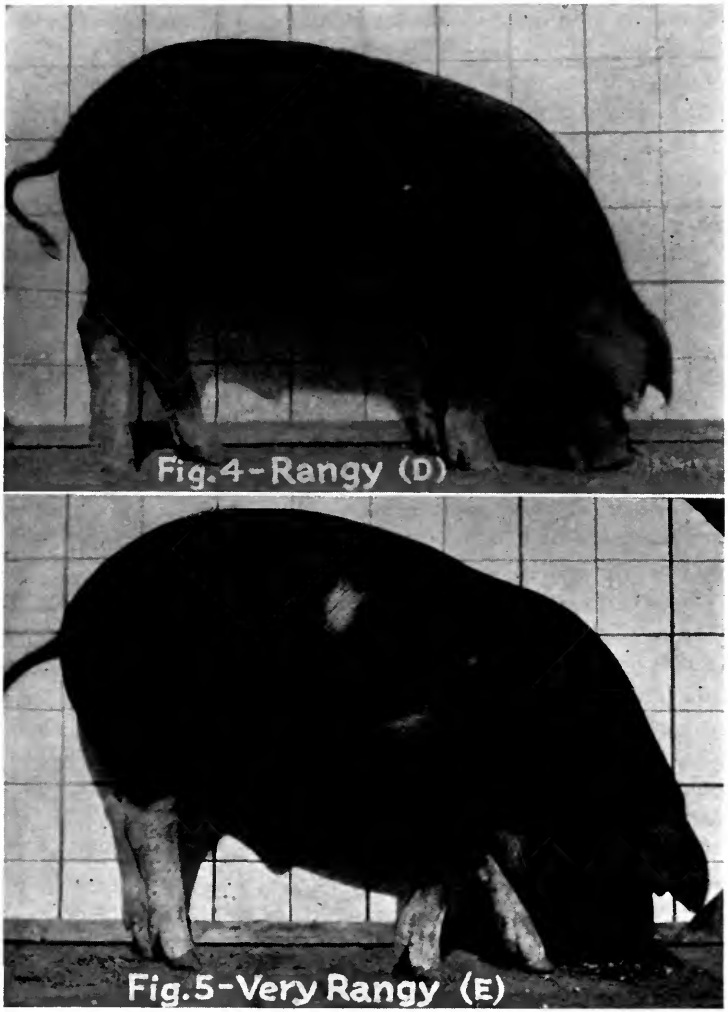
"As a consequence of the development of these cheaper substitutes, lard and fats accumulate faster than they sell. The price of lard is always affected by the supply of the vegetable substitutes. For protracted periods last year, for example, loose lard sold under the price of live hogs.

[1] Sleeter Bull, Associate Chief in Meats, and J. H. Longwell, formerly Associate in Animal Husbandry.

Fig. 1-Very Chuffy (A)

Fig. 2-Chuffy (B)

Fig. 3-Intermediate (C)



FIGS. 1 TO 5.—REPRESENTATIVE PIGS OF EACH TYPE AT 225 POUNDS

The *Very Chuffy* pig represented here was fed individually as No. 17 in the experiment. The *Chuffy* pig was self-fed as No. 1 in dry lot the same year, while Fig. 3 shows Intermediate pig No. 11 individually fed during the third experiment. The *Rangy* pig was fed individually as No. 5 in the second experiment, while the *Very Rangy* pig was No. 1 in the self-fed group the same year. Note the progressive change in length of leg, height of back, and length of body. A lower degree of finish was typical of the more rangy pigs at this weight.

"Along with the effect of the substitutes, consider the unwillingness of the public to eat fat attached to lean meat. The packing industry is each year removing more and more fat from the pork cuts it offers the public, putting this fat into the lard tank. Yet women, children, and even men fastidiously remove every remaining vestige of fat from a piece of boiled or broiled ham or from a pork chop.

"The increase in sedentary work and the diminution of hard labor may have something to do with this aversion to fat, or it may be due to the universal yearning for a more supple contour. At any rate lean meat is the style, and in my opinion this is due for no early change.

"As a consequence it behooves the livestock and meat industry to conform to these mandates, just as it behooves the clothing manufacturers and the shoe manufacturers to heed changes in styles of dress and footwear.

"Unquestionably the current marketing of lard and fats constitute a problem for the packing industry. Because of this situation, the lean meats must bring higher prices. If the lean meats could be produced without the present undue accompaniment of fat, they could be sold more cheaply and would be consumed more liberally since there are few substitutes in the eyes of the consumer for good, lean meat."

In order to produce pork cuts of the proper size and quality, without an excess of fat, the producer must supply a hog which is finished but not overdone at a weight of around 225 pounds; which is firm and hard; and which yields a maximum of the high-priced cuts, that is, loin, bacon, and ham.

Thus it seemed pertinent to determine which of the different types of lard hogs now in existence best filled the requirements of both producer and consumer. A series of investigations designed to throw light on the question was therefore begun at the Illinois Station in the summer of 1922. The work was continued in the fall of 1923, and concluded in the summer of 1925. In these experiments Poland China pigs of the following types were used:

Very Chuffy. These were extremely short-bodied, low-set thick animals of a type that is capable of being fattened at an early age, tho never attaining an extremely large size (Fig. 1). Perfection in this type was exemplified by the famous old boar, Chief Perfection 2d.

Chuffy. The Chuffy pigs were the same general type of animals as the Very Chuffy, tho they were much less extreme and showed considerably more size and growthiness. (Fig. 2)

Intermediate. The Intermediate pigs were longer both in body and in legs and lacked the thickness of back and the early fleshing qualities of the Very Chuffy and Chuffy types. (Fig. 3)

Rangy. The Rangy pigs showed more length of body and leg, were leaner and more growthy, showed a stronger arch to their backs, and carried somewhat more bone than pigs of the types described above. (Fig. 4)

Very Rangy. Tho more extreme in length and ranginess, the Very Rangy pigs were the same general type as the Rangy. (Fig. 5)

The data assembled in this publication will be of particular interest to producers since it records the grades of pork obtained from the various types of hogs, and indicates the actual market values of the types. For details concerning the care and feeding of the pigs up to time of slaughter, the reader is referred to Bulletin 321 of this Station, "Type in Swine, as Related to Rate and Economy of Gain."

FIRST EXPERIMENT

COMPARISON OF CHUFFY, INTERMEDIATE AND RANGY HOGS HAND-FED TO 225-POUND WEIGHTS

In the experiment of the first year (1922-23) Chuffy, Intermediate, and Rangy types of hogs were slaughtered when they reached individual weights approximating 225 pounds. Fifteen hogs of each type were taken off feed the day before slaughter and the live weights taken immediately before they were killed. The hogs were dressed "shipper style," that is, with head on, leaf in, and hams not faced. However, they were split down the center of the back bone while still warm. Both halves of the warm carcass were weighed and were then held in the cooler at 32° to 38° F. for several days, after which the right halves were placed in the sharp freezer at 10° to 20° F., where they were held until all hogs had been slaughtered.

DRESSING PERCENTAGES

In order to obviate the differences in the amounts of shrinkage due to varying lengths of time in the freezer, the dressing percentages were calculated on the basis of the warm carcass weights shrunk 2.6 percent. The live weight at slaughter, the warm carcass weight, the calculated cold carcass weight, and the dressing percentage of each hog are shown in Table 1.

There were no significant differences in dressing percentage between lots, the average of the Chuffy type being 76.9 percent, as compared with 77.6 percent for the Intermediate type and 77.4 percent for the Rangy type (Table 1).

CARCASS MEASUREMENTS

A number of measurements were made on the different carcasses. While the authors were unable to devise any system which was absolutely accurate, yet it was found after some practice that certain measurements could be made with a reasonable degree of accuracy (Fig. 6).

Some idea of the variations in the different types of carcasses may be had from Fig. 8. All photographs were taken with the same camera and at the same distance from the carcass.

The principal differences in the measurements of the carcasses from the three types of hogs were in length (Table 2). While the

TABLE 1.—LIVE WEIGHTS, WARM AND COLD CARCASS WEIGHTS, AND DRESSING PERCENTAGES OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT

Hog No.	Live weight	Warm carcass weight			Total cold weight[1]	Dressing percentage[2]
		Right half	Left half	Total		
Chuffy						
	lbs.	*lbs.*	*lbs.*	*lbs.*	*lbs.*	*pct.*
1	230	92.1	91.0	183.1	178.3	77.5
2	225	91.0	91.0	182.0	177.3	78.8
3	218	89.4	85.9	175.3	170.8	78.3
4	220	85.5	85.7	171.2	166.8	75.8
5	225	91.8	88.6	180.5	175.8	78.1
16	223	88.0	88.6	176.6	172.1	77.2
7	224	86.8	92.1	178.8	174.2	77.7
8	223	85.4	87.9	173.2	168.7	75.7
9	223	88.3	89.8	178.1	173.4	77.8
10	228	88.5	90.4	179.0	174.3	76.5
18	229	87.6	90.3	178.0	173.3	75.7
12	220	84.7	88.0	172.7	168.2	76.5
17	232	90.5	92.1	182.6	177.8	76.6
19	231	90.6	93.6	184.2	179.4	77.7
15	217	84.6	81.1	165.7	161.4	74.4
Average	.....	.....	.....	.....	.....	76.9
Intermediate						
4	224	89.7	91.0	180.7	176.0	78.6
9	221	91.4	86.0	177.4	172.8	78.2
16	230	91.3	92.0	183.3	178.5	77.6
11	230	91.0	94.0	185.0	180.2	78.3
5	230	90.9	90.6	181.6	176.8	76.9
2	230	89.9	92.9	182.9	178.1	77.4
8	222	87.2	90.1	177.2	172.6	77.7
6	226	89.6	91.2	180.9	176.2	78.0
12	226	86.3	87.3	173.7	169.1	74.8
13	230	88.6	89.6	178.2	173.6	75.5
15	230	85.3	94.2	179.5	174.9	76.0
10	219	85.5	91.1	176.6	172.0	78.5
19	218	84.8	90.9	175.7	171.2	78.5
7	225	89.4	91.9	181.3	176.6	78.5
18	224	91.8	91.9	183.7	178.9	79.9
Average	.....	.....	.....	.....	.....	77.6
Rangy						
20	221	89.6	89.0	178.6	173.9	78.7
16	225	92.9	91.2	184.1	179.3	79.7
12	223	88.5	88.2	176.6	172.1	77.2
5	229	90.2	90.3	180.5	175.8	76.8
14	224	85.7	93.3	179.0	174.4	77.8
1	219	88.2	90.3	178.5	173.9	79.4
2	223	92.9	87.2	180.1	175.4	78.6
19	219	90.5	87.7	178.2	173.5	79.2
7	236	94.2	92.4	186.6	181.8	77.0
4	232	91.8	90.9	182.7	177.9	76.7
9	222	85.7	88.2	173.9	169.4	76.3
3	226	81.3	92.7	174.0	169.5	75.0
15	228	89.3	90.4	179.7	175.0	76.7
6	230	87.2	90.7	177.9	173.3	75.3
18	224	83.9	91.0	174.9	170.3	76.0
Average	.....	.....	.....	.....	.....	77.4

[1]Equals 2.6 percent shrinkage of total warm carcass weight. [2]Expressed in percentage of live weight.

Rangy carcasses were longer than the Intermediate and the Chuffy, this greater length was due to a longer head and neck and to longer legs.

TABLE 2.—CARCASS MEASUREMENTS OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT
(Expressed in inches)

Hog No.	Snout to rear toe *a—b*	Snout to first thoracic vert. *a—c*	First thoracic vert. to H-bone *c—d*	H-bone to rear toe *d—b*	Depth of chest *e—f*	Depth of fat back *f—g*	Circumference of fore shank *j*
Chuffy							
1	65.5	17	27.5	21.5	15	1.9	6.1
2	65.5	16.5	27.5	22.5	13.5	1.7	5.9
3	66	16.5	27.5	23	14.5	1.9	5.6
4	68	17	28	24	14	1.5	5.7
5	64	17	26	22	14.5	1.9	5.5
7	62.5	16	27	21.5	14	1.7	6.0
8	64	17	27	22	14	2.5	5.7
9	67	16.5	27.5	23.5	13.5	1.6	6.1
10	67	18	27	23	15	1.7	6.2
12	67	18.5	27.5	21.5	14.5	1.9	5.9
15	66	17	27	23	14.5	2.0	5.7
16	66	17	27.5	23.5	14	1.9	5.7
17	69	17 5	29	24	14.5	1.5	6.0
18	67.5	16.5	28.5	22.5	14	1.9	6.2
19	67	17	28.5	23.5	14	1.9	6.3
Average	66	17	27.5	22.7	14	1.8	5.8
Intermediate							
2	67	16.5	29	22.5	11.7	2.1	5.7
4	68	16	30	23.5	11.1	1.6	5.8
5	69	17.5	28	23.5	12.2	1.7	6.1
6	66.5	16	28	23	11.1	1.9	5.7
7	65.5	16.5	27.5	23	11.9	2.0	5.7
8	64	17	28	22	11.3	1.7	5.6
9	66.5	17	28	22.5	11.2	1.7	5.8
10	67	17.5	28.5	23	11.9	2.2	5.8
11	67	16.5	29.5	22	12.3	1.7	6.2
12	66	17	28.5	23	11.9	1.9	5.7
13	67	17.5	29	22	11.6	1.7	5.9
15	66	17.5	28	23	11.5	1.5	6.0
16	67.5	17	28	23.5	11.6	1.6	5.8
18	68.5	17	28.5	23.5	10.5	1.7	5.8
19	65.5	16.5	29	22.5	10.6	1.9	5.9
Average	67	17	28.5	22.8	11.5	1.8	5.8
Rangy							
1	70	18	28	24.5	11.2	1.5	6.1
2	70	18	29	24	11.4	1.7	6.1
3	72	18.5	29.5	24.5	11.2	1.5	5.7
4	73.5	19	30.5	26	12.0	1.7	6.1
5	68	18	28	24.5	12.6	1.5	6.3
6	70.5	18.5	28	25.5	12.2	1.5	6.2
7	69.5	17.5	28.5	25	12.6	1.4	6.0
9	71	18.5	28.5	24.5	11.1	1.4	6.1
12	67.5	17.5	28.5	24	11.2	1.9	6.1
14	65.5	16	26.5	24.5	12.0	1.6	6.0
15	69	18	28	25	12.7	1.2	6.2
16	69.5	18	29	23.5	11.2	2.0	5.7
18	72.5	19	27	24	11.6	1.5	6.1
19	68	17.5	28.5	23.5	12.0	1.6	5.6
20	69	17	29.5	23.5	11.2	1.5	6.1
Average	70	18	28.5	24.4	11.8	1.6	6.0

Length of carcass (from snout to rear toe: *a–b*) did not vary greatly between the Chuffy and Intermediate types; however, the average length of the Rangy Carcasses was 3 inches greater than the average of the Intermediate type. There was some overlapping of individuals of the two lots.

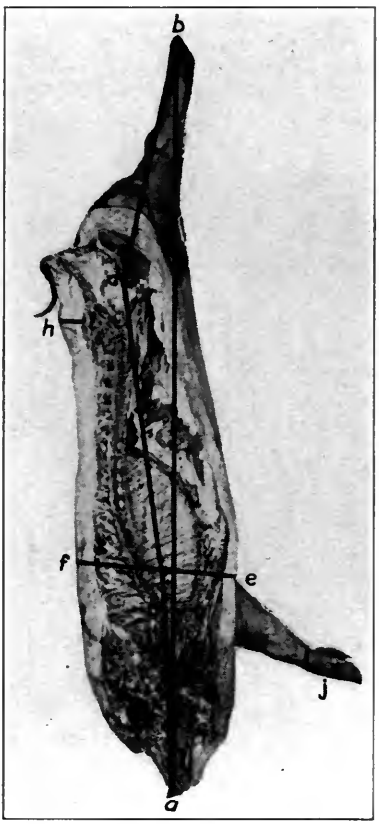


FIG. 6.—POINTS AT WHICH CARCASS MEASUREMENTS WERE MADE

Length of head and neck (from snout to the first thoracic vertebra: *a–c*) shows no difference between the Chuffy and Intermediate types. The Rangy carcasses, however, were 1 inch longer in this respect than the Intermediate carcasses. Again there was considerable overlapping between the individuals of the two types.

Length of body proper is represented by the distance from the first thoracic vertebra to the H-bone (*c–d*). This measurement for the Chuffy carcasses was 1 inch less than the average of the Intermediate carcasses, but there was no difference between the Intermediate and Rangy carcasses in this respect.

Distance from the H-bone to the tip of the rear toe (*d-b*) may be considered for comparative purposes as representing the length of the hind leg. There was no difference between the Chuffy and Intermediate carcasses in this respect. The average length of leg of the Rangy carcasses, however, was 1.6 inches greater than the average of the Intermediate type. Furthermore there was no overlapping of individuals.

Depth of chest (*e–f*) was not a very exact measurement owing to the carcasses assuming slightly different shapes in cooling. No differences were found between the Intermediate and Rangy carcasses in this measurement. Chuffy carcasses, however, were 2.7 inches deeper than the Intermediate and 2.2 inches deeper than the Rangy, and there was no overlapping between lots.

Depth of fat over the back (*f–g*), while an exact measurement, is not particularly important as it does not show the exact degree of condition, for one carcass may have a deeper covering of fat over the back and still contain a lower percentage of total fat than another carcass, as determined both by physical and chemical analyses. The depth of fat in the Chuffy and Intermediate carcasses was the same, 1.8 inches, while it was slightly less in the Rangy lot, 1.6 inches. Individual variations are so great that the difference has little significance.

Average circumference of shank was practically the same in all lots, being 5.8, 5.8, and 6.0 inches respectively for the three types.

FIG. 7.—CUTS OF PORK

(a) feet, (b) ham, (c) belly, (d) spareribs, (e) loin, (f) fat back, (g) clear plate, (h) boston, (i) picnic, (j) leaf fat, (k) neck bones, (l) head.

CUTTING TEST

The frozen carcasses were thawed and then cut into the regular wholesale packer cuts by expert butchers from Armour and Company. The head, including the jowl, was cut off square at the atlas joint, the hams were cut three fingers in front of the H-bone and the shoulders were 2-rib shoulders. The bellies were "regulars." Fig. 7 shows the location of the cuts, all of which were trimmed Armour style.

The cutting percentages of all three types (Tables 3 to 6) are all based on the weights of the cuts and the weight of the right half of the carcass immediately before cutting. It is needless to discuss these results except in so far as significant differences occur. In general the Rangy type carcasses had a lower percentage of cuts which ordinarily contain a large amount of fat. The differences between the Rangy and Intermediate types in fat back, clear plate, belly, and leaf fat are significant of type differences. The authors are unable to explain the small amount of clear plate in the Chuffy type and the large amount of trimmings in the Rangy carcasses.

FIG. 8. EXTREME AND TYPICAL CARCASSES OF CHUFFY, INTERMEDIATE, AND RANGY HOGS HAND-FED TO 225 POUNDS

Left, an extremely short, compact carcass of the Chuffy type; second, average of Chuffy type; third, average of intermediate type; fourth, average of Rangy type; and fifth, an extremely long, thin carcass of the Rangy type. Note the differences in total length, in length of legs, and in condition.

TABLE 3. – CUTTING PERCENTAGES OF CHUFFY HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	Fat back	Clear plate	Ham	Picnic	Boston	Loin	Belly	Spare-ribs	Head	Feet	Neck bones	Total trim	Leaf fat	Total
1	9.4	3.0	20.0	8.0	6.0	14.7	12.7	1.0	7.5	2.0	.4	10.1	2.4	99.1
2	9.5	2.6	22.8	7.1	5.5	13.5	14.5	1.0	7.5	2.2	.9	9.2	2.4	99.3
3	8.6	3.8	16.8	7.1	7.7	13.7	14.6	1.9	7.5	2.0	1.7	9.8	3.2	98.4
4	8.9	2.5	21.3	8.1	5.8	15.3	13.8	1.5	8.4	2.6	1.0	7.4	2.7	98.8
5	11.2	3.8	19.7	6.6	6.7	14.5	14.5	1.8	7.9	2.2	.8	7.5	2.1	99.4
17	8.8	3.1	21.4	8.1	6.1	15.3	14.3	1.3	6.3	2.1	1.1	6.5	2.8	100.2
16	9.6	2.7	19.6	8.6	7.3	14.1	12.5	1.6	7.9	2.1	1.4	8.6	3.0	99.8
7	9.5	3.0	20.7	8.1	6.9	15.0	13.8	1.9	5.7	1.9	1.2	8.9	2.7	99.3
8	9.5	2.2	22.0	7.6	5.3	15.3	13.3	1.3	5.8	1.8	1.0	10.0	2.3	97.6
9	9.1	3.5	19.9	9.1	6.1	13.1	13.0	1.7	9.1	2.5	1.5	8.8	2.2	99.6
10	8.0	3.1	22.0	10.3	6.5	14.3	10.5	1.7	6.6	2.3	1.7	10.0	3.0	100.0
18	7.4	2.3	20.8	9.5	5.6	14.0	11.8	2.1	7.9	2.4	1.3	11.3	2.8	99.4
18	9.9	3.5	17.5	8.5	6.3	13.8	15.3	2.0	8.7	2.2	1.2	6.9	3.7	99.4
12	10.0	3.3	20.0	8.1	6.3	14.0	12.6	1.4	7.6	2.0	1.4	9.6	2.2	99.4
15	10.0	2.9	18.0	8.1	5.9	13.2	15.2	1.8	7.7	2.0	1.4	8.4	3.3	98.1
Average	9.3	3.0	20.2	8.2	6.3	14.3	13.5	1.7	7.7	2.1	1.2	8.9	2.8	99.2

TABLE 4.—CUTTING PERCENTAGES OF INTERMEDIATE HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT

(Expressed in percentage of carcass weight)

Hog No.	Fat back	Clear plate	Ham	Picnic	Boston	Loin	Belly	Spare-ribs	Head	Feet	Neck bones	Total trim	Leaf fat	Total
12	11.6	3.5	19.0	7.7	7.0	14.0	14.1	1.6	7.0	1.9	1.2	6.9	3.4	99.0
2	11.0	3.1	20.7	8.6	5.4	14.4	13.3	1.9	6.2	2.0	1.6	8.0	2.8	99.0
11	8.4	2.7	19.8	9.0	5.8	14.1	13.5	2.1	8.3	2.3	1.3	9.3	2.4	99.2
15	8.2	2.5	20.1	8.9	6.4	14.6	15.8	1.9	5.7	2.0	1.1	8.3	2.3	97.9
18	11.6	4.5	19.8	6.7	7.2	14.3	11.9	1.5	7.2	2.0	1.1	8.0	2.7	98.3
10	8.6	3.5	20.0	7.4	7.2	15.4	12.7	1.6	7.6	2.2	1.2	8.3	2.7	98.3
13	7.7	3.9	19.2	7.5	8.0	14.0	13.7	1.9	6.8	1.9	1.4	9.0	3.0	98.0
5	8.3	4.0	19.0	6.9	9.2	13.5	13.2	1.6	6.1	2.1	1.2	10.0	3.2	98.4
7	8.0	2.8	19.8	7.4	7.7	14.8	14.0	2.1	5.4	1.9	1.5	10.4	2.7	98.7
8	8.1	2.6	19.9	8.1	6.4	13.9	14.9	1.7	5.9	2.0	1.2	10.4	3.1	98.3
6	10.8	5.0	17.8	7.3	7.9	13.0	12.0	1.7	7.0	1.9	1.5	8.8	3.7	98.5
16	8.3	2.8	21.4	7.4	6.4	15.2	12.3	2.3	7.1	1.9	1.3	9.8	2.1	98.3
9	9.7	3.7	19.3	7.7	6.9	14.7	12.2	2.1	7.6	1.9	1.3	10.4	2.3	99.9
4	8.9	3.3	20.6	7.4	7.1	13.7	12.3	2.0	6.6	2.1	1.3	10.1	3.2	98.5
19	10.6	3.6	19.9	6.7	6.7	14.0	11.8	2.1	5.9	2.1	1.1	10.5	3.0	98.1
Average	9.3	3.4	19.8	7.6	7.0	14.2	13.2	1.9	6.7	2.0	1.3	9.2	2.8	98.6

TABLE 5.—CUTTING PERCENTAGES OF RANGY HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	Fat back	Clear plate	Ham	Picnic	Boston	Loin	Belly	Spare-ribs	Head	Feet	Neck bones	Total trim	Leaf fat	Total
15	7.6	2.9	20.7	10.1	7.4	14.4	11.6	2.0	6.7	2.5	1.7	8.6	2.4	98.7
19	8.2	2.7	19.9	8.2	8.2	15.9	12.6	1.8	7.2	2.1	1.7	7.7	2.5	98.8
18	8.2	4.1	17.6	8.9	6.9	15.0	12.1	2.6	6.1	2.7	1.1	11.1	2.4	98.8
4	8.1	2.9	19.6	9.3	6.3	15.6	12.4	2.1	6.9	3.0	1.9	8.4	2.2	98.8
7	6.6	3.1	19.9	9.7	6.2	15.5	10.4	1.7	7.1	2.3	1.4	11.8	2.9	98.8
3	7.4	2.9	23.6	7.4	7.0	12.4	11.8	1.5	6.6	2.4	.6	12.5	2.9	99.1
14	9.5	3.9	22.9	8.5	7.5	12.7	11.8	1.7	4.8	2.7	1.1	10.4	1.8	99.4
1	7.5	3.0	20.9	8.0	6.6	13.4	13.7	2.0	6.6	2.5	1.3	10.9	2.2	98.7
2	10.2	3.0	20.4	7.5	6.8	15.0	10.9	2.2	6.4	2.2	1.7	9.7	3.4	99.3
6	7.3	2.9	22.1	8.4	5.5	12.2	12.5	2.2	6.6	2.6	1.1	12.9	1.9	98.3
5	7.5	2.9	20.5	8.3	8.0	13.4	11.2	1.7	7.9	2.3	1.6	10.6	2.2	98.2
12	9.4	3.7	20.1	8.9	6.6	12.7	11.2	1.9	7.3	2.3	1.7	11.5	1.7	99.2
9	5.9	2.6	23.4	8.0	7.0	13.8	13.4	1.9	7.3	2.6	1.1	8.7	2.8	98.5
16	10.7	3.9	21.0	7.3	6.1	14.4	3.0	1.9	6.3	2.0	1.3	9.0	2.3	99.2
20	7.3	3.5	20.4	7.5	7.5	13.4	13.0	1.7	7.5	2.3	1.7	11.2	1.9	99.1
Average	8.1	3.2	20.9	8.4	6.9	14.0	12.1	1.9	6.7	2.4	1.4	10.3	2.4	98.8

TABLE 6.—AVERAGE CUTTING PERCENTAGES OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT
(Expressed in percentage of carcass weight)

	Chuffy	Intermediate	Rangy
Fat back	9.3	9.3	8.1
Clear plate	3.0	3.4	3.2
Ham	20.2	19.8	20.9
Picnic	8.2	7.6	8.4
Boston	6.3	7.0	6.9
Loin	14.3	14.2	14.0
Belly	13.5	13.2	12.1
Spareribs	1.7	1.9	1.9
Head	7.7	6.7	6.7
Feet	2.1	2.0	2.4
Neck bones	1.2	1.3	1.4
Total trim	8.9	9.2	10.3
Leaf fat	2.8	2.8	2.4
Total	99.2	98.6	98.8

PHYSICAL COMPOSITION OF CUTS

The wholesale cuts were divided as accurately as possible with the knife into lean, fat, skin, and bone. In case of hams, picnics, and bellies the separation was made on the basis of the rough untrimmed cut, while for all other cuts it was on the trimmed basis. In this connection it should be noted that the chance for error in the individual cuts is considerable, owing to the incomplete separation of fat and lean, especially in such cuts as the head and belly. The individual data (Tables 7, 8, and 9) cannot be accepted, therefore as absolutely accurate. The average figures (Table 10) are probably more valuable.

Fat Backs. The fat backs from the Rangy hogs contained almost 20 percent more skin than those of the Intermediate hogs, while those of the Chuffy hogs contained about 7 percent less. Differences in their fat content were small.

Clear Plates. The same relative differences existed in the clear plates as in the fat backs.

Hams. The hams contained nearly the same amounts of lean. The Chuffy hams contained almost 7 percent more fat and the Rangy hams almost 7 percent less fat than the Intermediate ones. The superintendent of the pork cutting department of Armour and Company made the observation that some of the Chuffy hams were too fat for "regulars" and would have been made into "skinned hams." The hams from Hogs 2, 3, 5, 7, and 19 of the Chuffy hogs were excessively fat, having from 35 to 38 percent fat. Only one Intermediate ham, that from Hog 12, was too fat, containing 35.8 percent fat; none from the Rangy lot contained more than 34.3 percent fat. The Rangy hams

TABLE 7. PHYSICAL COMPOSITION[1] OF CUTS FROM CHUFFY HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT

(Expressed in percentage of weight of cut)

Hog No.	1	2	3	4	5	17	16	7	8	9	10	19	18	12	15	Aver.
Fat back																
Skin	11.0	7.6	7.0	11.0	7.9	6.8	9.8	8.3	10.8	9.3	7.7	11.0	8.6	8.8	8.9	9.0
Fat	89.1	92.3	93.0	89.3	90.1	92.3	89.3	95.0	89.2	88.9	91.4	88.0	91.4	91.3	91.1	90.8
Clear plate																
Skin	12.1	11.4	9.9	12.5	8.3	9.8	11.7	10.5	10.9	15.7	7.6	9.8	6.8	9.8	8.4	10.3
Fat	87.9	85.8	90.1	87.5	91.7	87.9	88.3	89.5	89.1	84.7	92.4	90.2	89.0	90.2	91.6	89.1
Ham																
Lean	51.1	48.2	51.3	53.3	50.7	54.0	52.1	51.0	52.8	50.2	53.4	47.1	51.9	55.5	52.8	51.7
Fat	33.3	38.4	35.1	31.2	36.0	31.0	33.2	35.0	32.7	33.8	32.4	38.0	33.0	31.4	31.7	33.7
Skin	5.7	4.5	3.8	4.7	4.6	3.1	4.8	4.7	4.4	5.2	4.3	3.8	4.9	4.1	4.6	4.5
Bone	9.5	8.7	9.8	10.4	8.5	8.7	8.5	8.7	9.1	10.5	7.7	8.6	8.7	9.0	10.4	9.1
Picnic																
Lean	51.4	48.5	43.9	56.8	50.8	52.7	50.4	63.7	44.5	47.0	50.2	43.6	49.4	53.3	41.9	49.2
Fat	32.9	33.8	39.6	25.3	29.7	30.7	35.1	30.8	38.1	36.3	37.8	42.1	35.9	23.1	42.5	34.2
Skin	5.2	5.6	5.1	5.5	7.3	4.1	4.5	5.2	5.5	4.8	3.4	5.1	5.3	6.6	5.0	5.3
Bone	10.5	11.9	10.8	11.6	10.9	12.0	10.8	10.5	10.9	11.3	8.6	9.2	10.0	11.9	10.6	10.8
Boston																
Lean	84.0	85.1	85.2	80.4	85.7	81.7	77.5	86.5	82.1	81.0	75.3	82.9	87.7	89.8	86.4	83.8
Fat	11.7	12.1	9.9	9.6	6.8	14.6	19.4	7.9	11.9	11.3	4.7	13.3	9.9	5.1	9.5	10.7
Bone	4.3	4.1	4.9	4.2	5.3	3.7	3.3	4.5	6.0	5.1	3.0	4.0	3.8	5.1	4.1	4.3
Loin																
Lean	71.0	64.1	65.5	69.8	68.1	66.2	65.0	68.4	66.2	66.7	65.6	53.9	67.0	72.0	67.3	66.5
Fat	12.0	16.6	12.7	9.4	12.7	13.7	15.6	11.4	12.0	16.9	15.0	22.5	13.9	10.9	10.3	13.7
Bone	17.0	19.4	21.6	20.8	18.3	19.1	18.9	15.6	20.3	17.6	18.3	23.6	18.4	16.5	22.4	19.2
Belly																
Lean	46.3	51.9	44.9	55.8	41.3	42.5	39.4	44.0	53.6	29.6	40.0	35.3	36.6	45.2	50.5	43.8
Fat	46.8	41.8	51.0	39.1	52.1	51.0	54.4	50.3	41.2	62.5	54.4	57.3	57.0	47.8	45.5	50.2
Skin	5.9	6.4	4.1	5.3	6.6	6.5	6.7	5.2	5.2	7.5	4.4	6.4	6.7	6.1	6.0	5.7
Spareribs																
Lean	61.3	48.1	48.1	47.1	54.0	49.6	50.4	50.0	50.0	54.3	54.3	57.1	61.3	59.4	52.1	53.1
Bone	38.7	52.7	51.0	52.9	46.0	61.0	44.8	50.0	42.0	45.7	45.7	39.4	38.7	41.5	47.9	46.0
Head																
Lean	25.5	20.0	26.3	18.9	13.0	20.1	19.8	21.9	28.7	15.3	18.6	28.1	16.1	19.0	16.7	20.6
Fat	29.5	42.1	29.2	35.9	39.0	42.7	42.6	45.2	23.2	44.0	39.0	34.5	48.3	36.9	37.5	38.0
Skin	11.8	12.0	8.1	13.3	11.1	8.9	13.0	11.0	15.1	13.6	12.8	11.2	13.4	12.6	12.5	12.1
Bone	33.4	25.0	35.4	32.1	35.3	25.8	24.7	19.3	31.6	27.1	26.8	28.1	24.1	31.6	32.3	28.8
Feet																
Skin	18.3	13.8	11.7	16.0	16.5	14.3	14.8	16.0	13.8	15.5	13.3	12.5	17.7	16.0	16.0	15.1
Bone	81.7	86.2	88.3	84.0	79.8	82.3	81.7	84.0	86.2	84.5	86.7	87.5	82.3	84.0	84.0	84.2
Neck bones																
Lean	38.7	25.3	38.9	30.9	27.5	33.0	22.1	26.6	23.5	21.0	54.3	16.8	33.0	38.9	33.6	30.9
Bone	61.3	74.7	61.1	69.1	72.5	67.0	77.9	73.4	77.8	79.0	40.6	77.9	67.0	61.1	66.4	68.5

[1] Physical composition is based on untrimmed cuts in cases of the hams, picnics, and bellies.

TABLE 8.—PHYSICAL COMPOSITION[1] OF CURED PORK [illegible] DRY LOT, 225-POUND WEIGHTS:

(Expressed in [illegible])

Hog No.	12	2	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	10	Aver.
Fat back																		
Skin	8.1	8.8	10.0	8.5	7.1	[illegible]										9.3	9.6	9.7
Fat	91.9	91.2	89.4	91.5	92.9											90.7	90.4	90.3
Clear plate																		
Skin	7.6	11.8	12.0	11.5	8.5	[illegible]										9.1	8.7	10.6
Fat	92.6	87.8	88.0	88.5	91.5											90.9	91.3	89.5
Ham																		
Lean	50.5	48.5	48.0	48.1	49.4	[illegible]										48.4	48.2	48.0
Fat	36.8	33.7	32.2	33.1	32.4											32.8	31.6	31.6
Skin	4.3	4.8	5.0	5.0	4.8											4.6	4.7	4.8
Bone	9.4	8.3	11.2	8.8	8.4											8.8	8.7	9.3
Picnic																		
Lean	49.0	52.3	52.0	52.0	51.1	[illegible]										52.8	52.8	51.0
Fat	34.3	33.8	32.0	33.1	34.1											32.4	32.3	31.8
Skin	4.8	4.3	5.0	5.4	4.8											5.0	6.2	4.8
Bone	11.9	10.0	11.0	10.5	10.0											10.3	10.7	11.3
Boston																		
Lean	84.0	87.5	87.1	86.2	86.5	[illegible]										87.2	87.4	87.3
Fat	10.0	6.0	6.4	7.3	7.4											7.3	7.4	7.4
Bone	4.0	5.5	6.5	6.5	6.1											5.5	4.7	4.8
Loin																		
Lean	69.3	72.1	68.0	67.0	70.1	[illegible]										71.4	67.4	67.6
Fat	11.7	7.5	13.1	15.3	12.5											11.3	15.2	12.8
Bone	19.0	18.7	17.9	17.7	17.4											17.3	17.4	18.9
Belly																		
Lean	44.3	44.2	44.0	43.0	43.0	[illegible]										43.1	43.2	43.9
Fat	50.0	49.1	49.0	49.3	50.1											49.7	49.3	49.5
Skin	5.7	6.8	7.0	7.1	6.9											7.1	6.8	6.7
Spareribs																		
Lean	49.7	49.7	50.9	51.0	49.7	[illegible]										50.1	44.4	48.5
Bone	48.1	49.7	48.5	48.1	49.5											48.6	50.1	49.5
Head																		
Lean	20.0	21.8	18.1	20.2	20.1	[illegible]										22.7	22.8	21.3
Fat	34.6	33.0	33.7	33.0	33.3											33.3	32.7	33.8
Skin	12.8	10.6	17.0	13.8	13.6											11.6	17.1	14.7
Bone	32.1	33.7	31.3	32.7	33.0											32.3	32.0	33.6
Feet																		
Skin	16.0	14.8	15.0	21.3	14.1	[illegible]										13.8	14.8	13.5
Bone	84.0	85.2	85.1	78.7	85.9											86.2	85.2	86.5
Neck bones																		
Lean	20.6	20.6	20.1	20.1	[illegible]											20.4	20.6	20.2
Bone	79.4	79.4	79.9	79.9												79.6	79.4	79.8

[1]Physical composition is based on [illegible]

TABLE 9.—PHYSICAL COMPOSITION[1] OF CUTS FROM RANGY HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT

(Expressed in percentage of weight of cut)

Hog No.	15	19	18	4	7	3	14	1	2	6	5	12	9	16	20	Aver.
Fat back																
Skin	11.9	11.6	9.7	13.7	14.0	11.9	9.8	10.2	10.0	12.1	12.7	11.2	13.3	9.5	12.4	11.6
Fat	88.1	88.4	92.3	86.3	84.9	88.3	90.2	89.8	90.8	87.9	86.2	88.1	86.9	90.7	86.6	88.4
Clear plate																
Skin	12.7	16.5	9.5	12.7	13.8	13.8	9.9	7.6	10.9	11.5	15.6	10.1	12.1	7.4	8.5	11.5
Fat	87.3	84.0	90.5	87.3	86.5	86.2	89.8	90.0	87.9	87.3	84.4	87.9	85.0	92.6	91.5	87.9
Ham																
Lean	55.8	57.3	48.0	54.0	56.6	54.1	52.1	51.0	57.6	52.6	52.2	52.1	60.4	55.1	56.7	54.4
Fat	27.2	27.7	33.9	27.2	25.2	30.6	31.6	34.3	28.0	29.8	31.7	32.6	24.7	30.7	28.9	29.6
Skin	5.9	5.1	5.5	5.7	6.3	5.9	5.6	4.2	4.6	5.6	6.0	4.8	4.6	4.2	4.6	5.2
Bone	10.2	9.7	12.6	12.8	11.0	8.8	10.0	9.5	9.3	11.1	10.0	9.9	10.0	9.3	9.5	10.2
Picnic																
Lean	52.5	55.3	40.9	39.7	58.2	48.5	49.3	44.4	54.1	43.7	47.7	53.3	49.7	50.7	51.5	49.4
Fat	29.4	25.7	41.1	39.7	25.2	31.9	31.4	37.6	28.6	38.3	33.4	27.7	31.1	32.5	32.2	32.4
Skin	6.4	3.3	6.5	7.5	6.3	7.4	6.5	5.5	5.7	6.9	6.3	5.6	5.3	5.2	5.6	5.9
Bone	10.8	12.5	11.6	12.4	10.7	11.7	12.2	11.7	10.8	10.6	12.0	11.1	13.9	11.7	10.6	11.6
Boston																
Lean	89.8	92.0	84.2	80.7	88.4	80.5	86.6	87.3	88.3	86.4	88.9	89.9	87.8	85.9	86.9	86.9
Fat	4.0	3.6	9.1	12.8	5.7	12.7	10.4	8.1	6.5	8.2	6.5	5.6	6.8	8.3	7.1	7.7
Bone	5.0	4.4	6.9	4.6	4.6	5.7	4.1	4.6	4.3	4.1	4.6	4.5	5.6	5.8	5.0	4.9
Loin																
Lean	69.8	72.2	64.4	66.8	65.5	60.6	69.6	66.7	71.6	67.9	69.2	61.7	67.6	67.5	64.6	67.6
Fat	7.3	5.6	14.2	9.5	15.2	10.9	11.0	10.8	5.8	10.3	8.8	14.7	9.6	11.2	13.5	10.6
Bone	22.4	20.8	18.8	23.2	18.9	18.1	19.5	21.5	21.6	21.2	20.9	22.4	22.2	20.5	21.4	20.9
Belly																
Lean	41.8	44.4	33.5	38.3	47.5	46.0	42.2	38.2	44.5	42.8	43.3	35.8	43.8	42.5	42.6	41.8
Fat	52.3	47.9	58.1	51.6	43.6	47.0	50.0	54.6	47.7	48.2	47.9	55.6	48.8	51.9	50.0	50.3
Skin	6.5	7.7	8.9	9.0	8.3	7.5	7.8	6.7	7.5	8.1	8.8	8.2	8.0	5.6	7.0	7.7
Spareribs																
Lean	55.6	50.0	51.5	48.6	50.0	47.1	54.3	46.0	53.2	50.0	38.9	51.9	51.9	52.1	43.8	49.7
Bone	44.4	50.0	45.6	51.9	50.0	52.9	45.7	54.0	46.8	50.0	61.1	44.2	48.1	47.9	54.2	49.8
Head																
Lean	21.4	26.6	19.3	15.0	18.1	26.9	12.9	13.8	27.5	19.1	21.5	29.9	22.5	11.5	25.2	20.7
Fat	21.4	22.5	30.7	20.2	20.0	24.4	48.5	36.8	22.5	22.5	37.4	23.8	22.5	36.0	29.2	27.9
Skin	13.5	9.1	14.1	16.5	16.0	14.6	19.3	13.8	13.5	15.8	13.2	12.4	12.9	13.6	15.2	14.2
Bone	43.9	40.8	34.6	46.8	45.0	34.1	19.3	32.2	34.9	41.5	28.1	33.0	42.1	37.5	30.4	36.3
Feet																
Skin	12.1	14.3	11.7	12.1	16.0	14.9	17.4	15.0	16.0	11.4	16.0	14.4	15.0	14.3	9.8	14.0
Bone	85.0	85.7	85.0	87.9	85.0	83.0	82.6	85.0	84.0	88.6	84.0	84.0	85.0	85.7	87.1	85.2
Neck bones																
Lean	18.1	17.4	21.6	34.4	20.0	29.5	21.6	31.9	30.6	29.8	27.5	30.6	14.8	16.8	18.1	24.2
Bone	81.9	78.5	78.4	65.0	80.0	70.5	78.4	68.1	69.4	70.2	72.5	69.4	85.2	83.2	81.9	75.5

[1] Physical composition is based on untrimmed cuts in cases of hams, picnics, and bellies.

TABLE 10.—AVERAGE PHYSICAL COMPOSITION OF CUTS FROM HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT
(Expressed in percentage of weight of cut)

Cut	Chuffy	Intermediate	Rangy	Cut	Chuffy	Intermediate	Rangy
Fat back				Belly			
Skin	9.0	9.7	11.6	Lean	43.8	43.9	41.8
Fat	90.8	90.2	88.4	Fat	50.2	49.5	50.3
Clear plate				Skin	5.7	6.7	7.7
Skin	10.3	10.6	11.5	Spareribs			
Fat	89.1	89.5	87.9	Lean	53.1	48.8	49.7
Ham				Bone	46.6	49.8	49.8
Lean	51.7	53.9	54.4	Head			
Fat	33.7	31.6	29.6	Lean	20.6	21.3	20.7
Skin	4.5	4.8	5.2	Fat	38.0	29.8	27.9
Bone	9.1	9.3	10.2	Skin	12.1	14.7	14.2
Picnic				Bone	28.8	33.6	36.3
Lean	49.2	51.0	49.4	Feet			
Fat	34.2	31.8	32.4	Skin	15.1	13.6	14.0
Skin	5.3	5.8	5.9	Bone	84.2	86.3	85.2
Bone	10.8	11.3	11.6	Neck bones			
Boston				Lean	30.9	26.2	24.2
Lean	83.8	87.3	86.9	Bone	68.5	72.6	75.5
Fat	10.7	7.4	7.7	Leaf fat			
Bone	4.3	4.8	4.9	Fat	100.0	100.0	100.0
Loin							
Lean	66.5	67.6	67.6				
Fat	13.7	12.8	10.6				
Bone	19.2	18.9	20.9				

contained more than 8 percent more skin and the Chuffy hams 6 percent less skin than the Intermediate. The Rangy hams in general were coarse, long in the shank, and carried an excessive amount of bone. The Rangy hams had almost 10 percent more bone than the Intermediate hams. There was little difference in bone between the Intermediate and the Chuffy hams. Four of the Rangy hams, from Hogs 18, 4, 7, and 6, contained 11 to 12.8 percent of bone. Only one Intermediate ham had more than 10.5 percent bone, that from Hog 11 having 11.2 percent. None of the Chuffy hams had more than 10.5 percent bone.

Picnics. The picnics contained about the same amount of lean. The Chuffy picnics had 7.5 percent more fat than the others. There were practically no differences between the Intermediate and Rangy picnics in amounts of fat, skin, and bone. Since no very close distinctions are made in the commercial grading of picnics, all would probably have graded as No. 1.

Bostons. No material differences in physical composition between the Rangy and the Intermediate bostons were evident. The bostons from the Chuffy hogs, however, were almost 45 percent fatter than those from the Intermediate and Rangy types.

Bellies. In their average content of lean and fat there were no significant differences between the bellies of the different types. A study of the individual data reveals some interesting facts. The finish of the Chuffy bellies was not uniform. Three bellies were quite fat, containing 57 to 63 percent, and 3 were rather thin, containing 39 to 42 percent of fat. The other 9 bellies were moderately fat, containing from 45.5 to 54.4 percent of fat. The intermediate bellies were quite uniform in finish and all of them were moderately fat, containing from 44.1 to 54.7 percent of fat. One belly of the

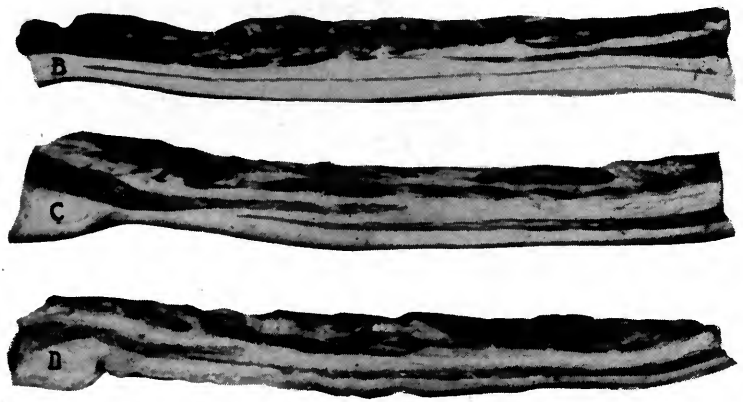


FIG. 9.—BELLIES OF CHUFFY, INTERMEDIATE, AND RANGY HOGS HAND-FED TO 225 POUNDS

The top belly from a Chuffy hog is a little too fat. The middle belly from an Intermediate hog is choice, and the bottom one from a Rangy hog lacks quality.

Rangy lot was quite fat, containing 58.1 percent. The other 14 bellies of this lot were only moderately fat, ranging from 43.6 to 55.6 percent fat. In other words, the Intermediate and the Rangy bellies had the more desirable finish. The Rangy bellies were coarse and had a heavy rind. They contained 15 percent more skin than the Intermediate bellies, while the Chuffy bellies contained 15 percent less than the Intermediates. On the whole, the Rangy bellies seemed to lack quality. This point was emphasized by the butchers who did the cutting. Fig. 9 shows typical bellies of all three types—Chuffy, Intermediate, and Rangy.

Loins. The loins of the three types contained practically the same amounts of lean. The Chuffy loins contained 7 percent more fat, and the Rangy loins contained 17 percent less fat, than the Intermediate loins. In bone content the Rangy loins were 10 percent higher than the Intermediate loins. The Chuffy and Intermediate loins had practically the same amount of bone.

Spareribs. The figures on spareribs cannot be regarded as very accurate, owing to the fact that in splitting the hog thru the chest, the butcher goes to one side or the other of the center, leaving a correspondingly greater or less amount of breast bone on the ribs. It should be noted that about one-half of the weight of this cut was bone, making it a very expensive cut at ordinary market prices.

Heads. The data for the heads are not very accurate, owing to inequalities in splitting. In lean content there were practically no differences between types. In fat content the heads of the Chuffy type were approximately 28 percent higher than the heads of the Intermediate type. The Rangy heads had 6.4 percent less fat than the Intermediate heads. There was practically no difference between the Intermediate and Rangy heads in amount of skin, while the Chuffy had 18 percent less skin. In bone, the Rangy heads were 8 percent higher and the Chuffy 14 percent lower than the Intermediate.

Feet and Neck Bones. There were no differences in the composition of the feet of the different types. The neck bones are not a very definite cut, owing to differences in splitting.

PHYSICAL COMPOSITION OF CARCASSES

Amount of Lean. The differences in the average amounts of lean in the carcasses of the three types were insignificant (Table 11). If the percentage of lean is calculated on the basis of the fat-free carcass, the influence of condition is eliminated and the result is an indication of the amount of natural fleshing. Calculated in this manner the Chuffy carcasses contained an average of 70.0 percent lean, the Intermediate 69.1, and the Rangy 67.6. In other words the results do not show that the Rangy type contained more natural flesh than the Chuffy and Intermediate types.

The amount of lean in the carcass is of particular importance to the consumer, who usually discriminates against a piece of meat which contains a small proportion of lean. Furthermore, the amount of lean indicates the amount of natural fleshing or muscling of the animal and thus determines to a large extent the nutritive value and the palatability of the meat. It should be borne in mind that a high percentage of lean may be due to a large amount of muscling in the animal or to a small amount of fat, that is, to undercondition and that lack of finish is accompanied by lack of firmness.

Amount of Fat. In fat content the differences between types were small but consistent. The Chuffy carcasses contained 5.4 percent more fat and the Rangy carcasses 6 percent less fat than the carcasses of the Intermediate type. Later investigations have shown us that the carcass of a 225-pound hog must contain at least 37 or 38 percent of fat (as separated with the knife) in order to be sufficiently finished.

TABLE 11.—PHYSICAL COMPOSITION OF CARCASSES OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: FIRST EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	Lean	Fat	Skin	Bone	Hog No.	Lean	Fat	Skin	Bone
					Chuffy				
1	49.9	36.8	5.6	11.7	10	44.9	39.0	4.5	11.7
2	43.2	39.8	5.1	11.9	12	45.7	37.1	5.3	11.9
3	43.2	39.1	4.1	13.6	15	42.5	38.8	5.2	13.5
4	47.0	33.9	5.5	13.6	16	42.3	40.3	5.4	12.0
5	41.8	40.5	5.4	12.3	17	44.4	38.6	4.4	12.6
7	45.3	39.1	4.8	10.8	18	41.1	42.0	5.3	11.6
8	45.9	36.0	5.5	12.7	19	39.9	43.0	5.0	12.0
9	38.5	42.0	6.0	13.4	Average	43.4	39.1	5.1	12.4
					Intermediate				
2	44.6	37.5	5.6	12.3	11	44.8	34.4	6.6	14.1
4	44.7	36.3	5.8	13.2	12	42.5	40.3	4.9	12.3
5	43.8	36.8	5.6	13.8	13	43.4	37.7	5.6	13.2
6	42.7	39.5	5.7	12.1	15	46.3	36.0	5.3	12.4
7	47.3	34.6	5.4	12.7	16	46.4	35.2	5.3	13.0
8	46.4	36.8	5.0	11.8	18	41.9	40.4	5.1	12.6
9	45.2	36.2	5.5	13.0	19	45.2	36.5	6.1	12.3
10	44.2	37.7	5.2	12.8	Average	44.6	37.0	5.5	12.8
					Rangy				
1	42.4	38.6	5.5	13.5	12	43.0	37.2	6.1	13.8
2	47.3	33.5	5.6	13.7	14	43.7	37.6	6.4	12.3
3	45.7	34.9	6.6	12.8	15	46.6	32.1	5.4	15.5
4	43.5	32.2	6.9	17.5	16	43.0	38.6	5.1	13.3
5	44.9	34.6	6.4	14.0	18	40.1	39.4	5.9	14.5
6	43.4	35.4	6.6	14.6	19	48.8	30.7	5.6	14.9
7	48.1	30.0	6.7	15.1	20	45.4	35.2	5.6	13.8
9	47.9	31.0	5.8	15.3	Average	44.9	34.7	6.0	14.3

Using 37 percent as the minimum, it is seen that 3 Chuffy hogs, 9 Intermediate hogs, and 10 Rangy hogs were not fat enough. None of the Chuffy and Intermediate carcasses were particularly lacking in condition. Five of the Rangy carcasses were entirely too thin, containing only 32 percent or less of fat.

It should be noted that 10 of the 15 Rangy carcasses contained less fat than the average contained in the Intermediate carcasses, while 12 of the Chuffy carcasses contained more fat than the average of the Intermediate carcasses. Judging from results in later experiments, none of the carcasses was too fat for the general trade.

The amount of fat is very important as determining the finish or condition of the hog. Pork which is unfinished is soft, flabby, watery, and unpalatable. The bellies are too thin to make a good grade of bacon. Furthermore, lard is an important product of the carcass for which there is a constant demand. On the other hand, pork which is overdone contains more fat than the consumer desires, particularly

in the bellies and hams and therefore sells at a discount unless lard is high in price. Also, the consumer is quite particular as to the size of the cuts which he buys. While his taste in this matter varies somewhat with different seasons of the year, a hog weighing 225 pounds meets his requirements. Hence it is desirable for the producer to supply a hog which is finished, but not overdone at this weight.

Amount of Skin. The Chuffy carcasses contained 7.3 percent less skin and the Rangy carcasses 5.5 percent more skin than the Intermediate carcasses. The amount of skin is of importance as an indication of the quality and texture of the meat, a heavy, coarse skin usually being associated with coarse, stringy meat. Also, since the skin is inedible, the consumer objects to a tough, heavy rind, particularly on bacon and ham.

Amount of Bone. The Chuffy carcasses contained practically the same amount of bone, and the Rangy carcasses 12 percent more bone, than the Intermediate carcasses. The amount of bone is of interest both to producer and to consumer. The producer demands that there be enough bone for the hog to be a good "rustler," stand up well on his feet, and carry his back high. The consumer demands as little bone as possible, since it is inedible. In fact, the consumer would have no bone in his meat if such a thing were possible. The ideal, therefore, is to have no more bone than is necessary for the needs of the live hog.

SECOND EXPERIMENT

COMPARISON OF HAND-FED AND SELF-FED HOGS OF ALL TYPES SLAUGHTERED AT THREE WEIGHTS

In the second experiment (1923-24), 6 hogs of the Very Chuffy type, 3 of the Intermediate, and 3 of the Rangy, all hand-fed, were slaughtered at approximately 175 pounds. Two of the Very Chuffy type (hand-fed), 4 of the Intermediate (hand-fed), 5 of the Rangy (hand-fed), and 2 of the Very Rangy (self-fed) were carried to 275 pounds. All the other hogs were slaughtered at 225 pounds.

The hogs were taken from the feed lots, fasted overnight and their live weights taken just before slaughter. The procedure here differed from that of the first year only in that the hams were faced. The warm carcass weights were taken and the carcasses placed in the refrigerator at 32° to 36° F. until they were cut up several days later.

DRESSING PERCENTAGES

As in the preceding experiment, the dressing percentages were based upon the warm carcass weights shrunk 2.6 percent. The individual and average dressing percentages are given in Tables 12 and 13.

TABLE 12.—DRESSING PERCENTAGES OF SELF-FED HOGS, 225-POUND AND 275-POUND WEIGHTS: SECOND EXPERIMENT
(Expressed as percentage of live weight)

Chuffy		Intermediate		Rangy		Very Rangy		Very Rangy	
225-pound weights								275-pound weights	
No.	*pct.*	*No.*	*pct.*	*No.*	*pct.*	*No.*	*pct.*	*No.*	*pct.*
40b	81.5	30s	79.6	2b	79.1	9b	76.4	60b	78.7
9s	80.7	0s	79.8	9b	76.5	30b	78.2	0b	77.7
10b	79.8	33s	80.1	30b	78.9	0s	75.2		
30b	76.8	99b	79.6	90b	78.1	0mb	75.2		
0s	79.1	60s	78.4	20b	82.1	93b	77.3		
0b	81.2	30b	80.1	99s	76.9				
10s	79.8	91s	77.7	0b	74.9				
0b	78.3	90s	79.1	1b	77.6				
96s	80.7	99s	79.0	3s	77.0				
				20s	76.4				
Average	79.8	Average	79.3	Average	77.8	Average	76.5	Average	78.2

TABLE 13.—DRESSING PERCENTAGES OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 175-, 225-, AND 275-POUND WEIGHTS: SECOND EXPERIMENT
(Expressed as percentage of live weight)

Very Chuffy		Intermediate		Rangy	
175-pound weights					
Hog No.	*pct.*	*Hog No.*	*pct.*	*Hog No.*	*pct.*
18b	77.4	13b	75.1	14b	75.0
20s	78.3	5s	74.2	20b	74.7
19b	79.1	3s	78.2	15b	76.8
9s	77.5				
6b	78.2				
16s	80.3				
Average	78.5	Average	75.8	Average	75.5
225-pound weights					
15b	80.1	9b	75.6	9s	77.5
11b	80.1	18s	77.0	16b	78.5
17s	77.1	15b	78.0	8b	74.7
		19b	78.6	2b	79.3
		2b	80.0	11b	77.5
		20s	78.7	5b	77.4
		1b	81.8		
Average	79.1	Average	78.6	Average	77.5
275-pound weights					
5s	80.5	12b	80.8	13b	79.9
8b	81.3	16b	80.8	3b	81.3
		17b	80.2	6b	79.8
		10s	81.0	1s	83.0
				10b	80.3
Average	80.9	Average	80.7	Average	80.9

Hand-Fed Hogs Slaughtered at 175 Pounds. Of the hogs killed at 175 pounds, all of which were hand-fed, the Very Chuffy dressed significantly higher than the Intermediate and the Rangy. This is probably explained by the fact that the Very Chuffy hogs were relatively fatter at this weight than the Intermediate and Rangy hogs. No significant differences were revealed between the Intermediate and Rangy hogs killed at this weight.

Hand-Fed Hogs Slaughtered at 225 Pounds. The average dressing percentages of the hand-fed hogs slaughtered at 225 pounds were as follows: Very Chuffy (3 hogs), 79.1 percent; Intermediate (7 hogs), 78.6 percent; and Rangy (6 hogs), 77.5 percent. However, there is so much individual variation that the differences do not appear significant.

Self-Fed Hogs Slaughtered at 225 Pounds. The self-fed hogs slaughtered at 225 pounds gave the following average dressing percentages: Chuffy type (9 hogs), 79.8 percent; Intermediate type (9 hogs), 79.3 percent; Rangy type (10 hogs), 77.8 percent; and Very Rangy type (5 hogs), 76.5 percent. From a study of the individual data it is seen that there were practically no differences between the Chuffy and Intermediate hogs in this respect; in fact these two lots were quite similar in appearance, conformation, and condition—more so than were those of any other two lots. Neither does the difference between the Intermediate and Rangy lots seem to be significant. Only one of the Very Rangy hogs dressed higher than the lowest of the Intermediate type. Apparently the difference between the Intermediate and Very Rangy types is significant, while that between the Rangy and Very Rangy is not.

Hogs Slaughtered at 275 Pounds. Of the hogs slaughtered at 275 pounds, all were hand-fed except the Very Rangy, which were self-fed. The average results were as follows: Very Chuffy (2 hogs), 80.9 percent; Intermediate (4 hogs), 80.7 percent; Rangy (5 hogs), 80.9 percent; and Very Rangy (2 hogs), 78.2 percent. From the individual data it is observed that there were no differences between the first three types, while the Very Rangy type dressed lower than the others. These results are explained by the fact that the Very Rangy hogs were decidedly lacking in condition at this weight, 275 pounds.

CARCASS MEASUREMENTS

The same carcass measurements were taken as in the preceding experiment except that the depth of fat was taken at the loin just over the lumbosacral union (*h-i*, Fig. 6, page 404). Also, an attempt was made to obtain an idea of the length of the foreleg by measuring the distance from the point of the elbow to the tip of the toe as the cooled carcass hung from the rail.

Hand-Fed Hogs Slaughtered at 175 Pounds. The individual and average measurements of the carcasses of the hogs slaughtered at 175 pounds (all of which were hand-fed) are given in Table 14.

The Very Chuffy carcasses were much shorter from snout to rear toe (6.7 inches) than the Intermediate carcasses and there was no overlapping of individuals between lots. On the other hand, there was no significant difference between the Intermediate and Rangy carcasses in this respect. From snout to first thoracic vertebra, the Very Chuffy carcasses were distinctly shorter (1.3 inches) than the Intermediate carcasses. Again, there was no overlapping of individuals and no difference between the Intermediate and Rangy carcasses. In length of body (first thoracic vertebra to H-bone) the Very Chuffy carcasses were 2.3 inches shorter than the Intermediate carcasses, with no overlapping of individuals. There was no difference between the Intermediate and Rangy carcasses. In length of hind leg (H-bone to rear toe), the Very Chuffy carcasses were 2.9 inches shorter than the Intermediate carcasses, with no overlapping of individuals. There is an indication that the Rangy carcasses may have been slightly longer in the hind leg than the Intermediates. However, the small number of individuals and the overlapping of the same, detracts from the importance of any apparent difference.

In depth of chest, there were no differences between lots. In depth of fat over the loin there was such great individual variation that it is impossible to draw any definite conclusions. Apparently, however, the Rangy hogs carried less fat than the others. In circumference of fore shank (size of bone) the Very Chuffy hogs were smallest, with no difference between the Intermediate and Rangy types. In length of foreleg the Very Chuffy carcasses were shorter than the Intermediate carcasses by 1.3 inches. There was no overlapping of individuals. The forelegs of the Rangy carcasses were .7 inch longer than those of the Intermediate type, with one case of overlapping.

The carcasses of Hog 9s of the Very Chuffy type, Hog 3 of the Intermediate type, and Hog 20 of the Rangy type, all slaughtered at 175 pounds, are shown in Fig. 10. The measurements of each of these carcasses represent the average measurements of its lot; thus, they are the "average" carcasses.

Hand-Fed Hogs Slaughtered at 225 Pounds. The individual and average measurements of the hand-fed pigs killed at 225 pounds are given in the second part of Table 14.

The carcasses of the Very Chuffy hogs were 5.9 inches shorter than those of the Intermediate hogs and the carcasses of the intermediate hogs were 5 inches shorter than those of the Rangy hogs. These differences are significant, especially in view of the fact that there is no overlapping of individuals between lots.

TABLE 14.—CARCASS MEASUREMENTS OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 175-POUND AND 225-POUND WEIGHTS: SECOND EXPERIMENT

(Expressed in inches)

Hog No.	Live weight *lbs.*	Snout to rear toe	Snout to first thoracic vert.	First thoracic vert. to H-bone	H-bone to rear toe	Depth of chest	Depth of fat back	Circumference of fore shank	Length of foreleg
175-POUND WEIGHTS									
Very Chuffy									
18b	178.9	61.5	16.0	26.2	20.0	12.2	1.0	5.4	12.7
20s	167.0	58.7	15.5	25.4	18.5	12.0	1.2	5.0	11.7
19b	178.9	58.7	14.7	25.1	19.0	12.6	1.2	5.1	12.2
9s	183.8	59.6	15.4	25.6	19.5	11.6	1.4	5.1	12.0
6b	168.9	59.7	14.5	25.5	20.2	12.5	1.0	5.2	12.7
16s	190.7	59.7	16.0	25.0	19.2	13.6	1.7	5.0	12.4
Average	178.0	59.7	15.3	25.5	19.4	12.4	1.3	5.1	12.3
Intermediate									
13b	182.6	67.0	16.3	27.9	22.5	12.2	1.0	5.7	13.5
5s	170.9	66.5	16.7	28.1	22.0	11.9	1.4	5.5	13.5
3s	183.6	65.6	16.6	27.4	22.4	13.2	1.7	5.1	13.9
Average	179.0	66.4	16.6	27.8	22.3	12.5	1.4	5.5	13.6
Rangy									
14b	169.9	66.0	16.5	27.1	23.0	12.2	1.2	5.5	13.5
20b	174.9	66.5	17.0	27.9	22.1	12.4	1.1	5.5	14.0
15b	188.2	68.5	17.0	28.1	23.7	12.6	1.0	5.5	15.5
Average	177.7	67.0	16.8	27.7	23.0	12.4	1.1	5.5	14.3
225-POUND WEIGHTS									
Very Chuffy									
15b	208.2	59.2	15.2	25.2	19.4	14.1	2.1	5.5	12.4
11b	226.1	65.5	17.2	27.7	20.5	13.0	1.5	5.9	13.2
17s	234.8	61.5	16.2	25.7	20.2	14.4	2.0	6.0	12.9
Average	223.0	62.1	16.4	26.2	20.0	13.8	1.9	5.8	12.8
Intermediate									
9b	224.0	66.7	17.2	28.5	21.5	13.2	1.5	5.6	14.5
18s	239.2	69.0	18.2	28.7	23.0	14.2	1.7	5.6	15.0
15b	224.4	70.5	18.2	29.0	24.2	13.7	1.5	5.6	15.4
19b	223.9	68.0	17.5	28.0	22.5	14.1	1.7	5.5	14.2
2b	228.2	68.0	18.1	28.4	23.1	15.2	2.0	5.6	15.1
20s	235.0	68.0	18.0	29.2	22.2	14.7	1.7	5.5	13.5
1b	218.6	66.0	17.0	27.5	22.5	14.2	1.6	5.5	14.5
Average	227.6	68.0	17.8	28.5	22.7	14.2	1.7	5.6	14.6
Rangy									
9s	228.4	72.7	17.7	30.4	24.7	13.6	1.6	5.9	16.1
16b	225.3	71.2	18.0	29.0	24.0	13.9	1.0	6.0	15.7
8b	219.9	74.4	18.5	31.5	25.0	13.5	1.0	6.2	16.6
2b	221.0	71.9	18.1	30.0	24.4	14.2	1.5	5.9	15.7
11b	240.4	74.4	18.4	31.2	25.5	14.5	1.5	6.0	16.0
5b	232.4	73.2	17.9	31.0	25.1	14.5	1.1	6.0	16.0
Average	227.9	73.0	18.1	30.5	24.8	14.0	1.3	6.0	16.0

In length of head and neck (snout to first thoracic vertebra), the average of the Very Chuffy hogs was 1.4 inches shorter than the average of the Intermediate lot. Also, there is only one case of overlapping between individuals of these lots. The average length of head and neck of the Rangy type was only .3 inch greater than in case of the Intermediate lot; furthermore, there was much variation within these two lots.

In length of body (first thoracic vertebra to H-bone) the average of the Very Chuffy hogs was 2.3 inches less than the average of the

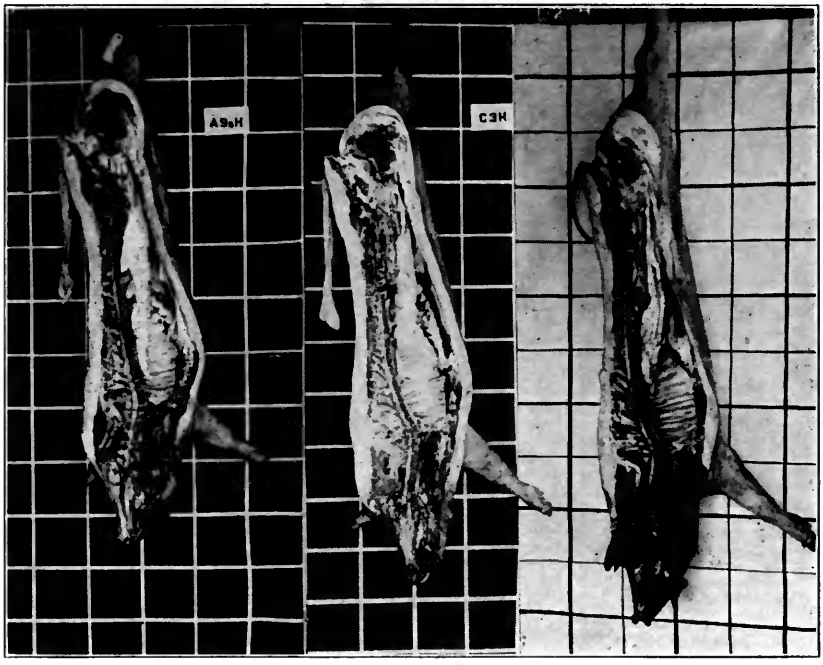


FIG. 10.—TYPICAL CARCASSES OF VERY CHUFFY, INTERMEDIATE, AND RANGY HOGS HAND-FED TO 175 POUNDS

Left, average of the Very Chuffy type; middle, average of Intermediate type; and right, average of Rangy type. Note the differences in length, hams, necks, and legs.

Intermediate, with no overlapping of individuals between lots. The average of the Intermediate hogs was 2 inches less than that of the Rangy hogs, with only one hog overlapping. In length of hind leg the average of the Very Chuffy hogs was 2.7 inches less than the average of the Intermediate hogs. Again, the lowest figure of the Intermediate lot was greater than the highest figure of the Very Chuffy lot. The average of the Intermediate lot was 2.1 inches less than the average of the Rangy lot, with only one individual overlapping. In

length of foreleg the same relationships held true, the Very Chuffy being 1.8 inches shorter than the Intermediate and the Intermediate being 1.4 inches shorter than the Rangy carcasses, and again there was no overlapping between lots.

In depth of chest the differences were small and apparently insignificant. In depth of fat over the loin two hogs of the Very Chuffy type were greater than all the hogs of the Intermediate type except one, but the average of the Intermediate lot was .2 inch less. The

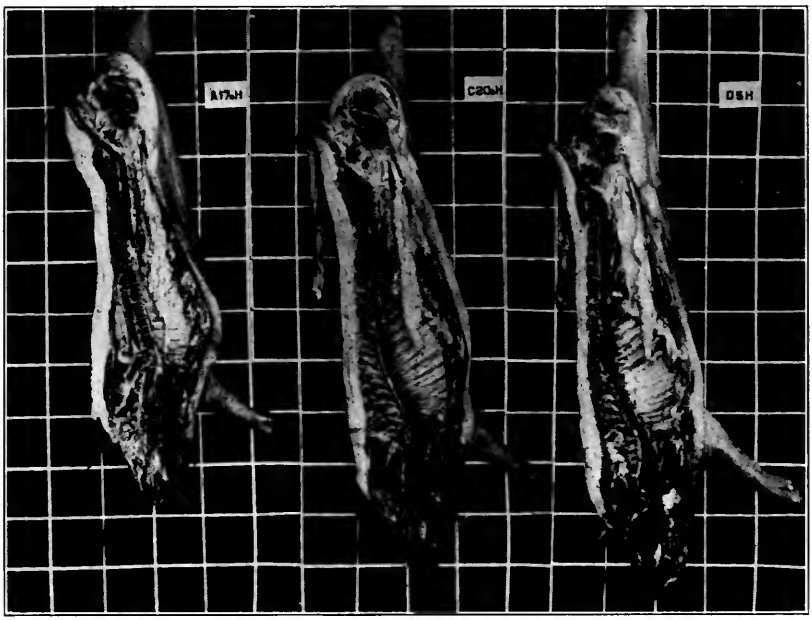


FIG. 11.—TYPICAL CARCASSES OF VERY CHUFFY, INTERMEDIATE, AND RANGY HOGS HAND-FED TO 225 POUNDS

Left, average of the Very Chuffy type; middle, average for Intermediate; and right, average for Rangy type. Compare with self-fed hogs, Fig. 12.

highest hog of the Rangy lot was higher than the two lowest hogs of the Intermediate lot, but the average of the Intermediate lot was .4 inch greater than the average of the Rangy. The circumference of fore shank was .4 inch greater in the Rangy than in the Intermediate hogs, with no individuals overlapping. Considering the small number and the great variations in the Very Chuffy lot, no conclusions can be drawn as to any difference between this and the Intermediate lot.

The "average" carcasses of the hand-fed hogs slaughtered at 225 pounds are shown in Fig. 11.

Self-Fed Hogs Slaughtered at 225 Pounds. The individual and the lot measurements for the Chuffy, the Intermediate, the Rangy, and

the Very Rangy hogs which were self-fed and slaughtered at 225 pounds are shown in Table 15.

These data show no difference in length of carcasses of the Chuffy and Intermediate types. As stated previously, these two types when self-fed were quite similar. The average length of the Intermediate carcasses, however, was 4.5 inches less than that of the Rangy carcasses. The longest Intermediate carcass was longer than the two shortest Rangy carcasses; otherwise there was no overlapping. The average length of the Very Rangy carcasses was 3.9 inches longer than the average of the Rangy carcasses; there was considerable individual variation, however, within the lots. In the distance from the end of the snout to the first thoracic vertebra, there were no significant differences between the types.

In length of body (first thoracic vertebra to H-bone) there was no material difference between the Chuffy and Intermediate lots. The average length of body of the Rangy lot, however, was 1.9 inches greater than that of the Intermediate lot. It will be noted also that the longest individual in the Intermediate lot was shorter than the shortest in the Rangy lot. The average of the Very Rangy lot was 1.7 inches greater than the average of the Rangy lot. However, there was considerable overlapping of individuals. The length of body of the Very Rangy type was significantly greater than that of the Intermediate and Chuffy types.

In length of hind leg there was no difference between the Chuffy and Intermediate lots, but the average of the Rangy lot was 2 inches greater than the average of the Intermediate lot. Furthermore, the highest individual of the Intermediate lot was lower than all except one of the Rangy lot. The average of the Very Rangy lot was 1.5 inches more than the average of the Rangy lot; however, there was considerable overlapping among the individuals of the two lots.

In length of foreleg there was no difference between the Chuffy and Intermediate types. The average of the Rangy type was 1.2 inches greater than the average of the Intermediate type. Two individuals of the Rangy type were slightly lower than the highest individual of the Intermediate type. The average of the Very Rangy type was .9 inch greater than the average of the Rangy type, but the individual variations detract from the significance of this difference.

In depth of chest there were no significant differences between any of the lots. In depth of fat over the loin, there was but small difference between the Chuffy and Intermediate lots, particularly if one eliminates Hog 0s from the Chuffy lot. For some reason this hog was not in very high condition. There was a difference of .4 inch (about 30 percent) between the average of the Intermediate and the average of the Rangy lot. Furthermore, only two hogs of the Rangy lot were

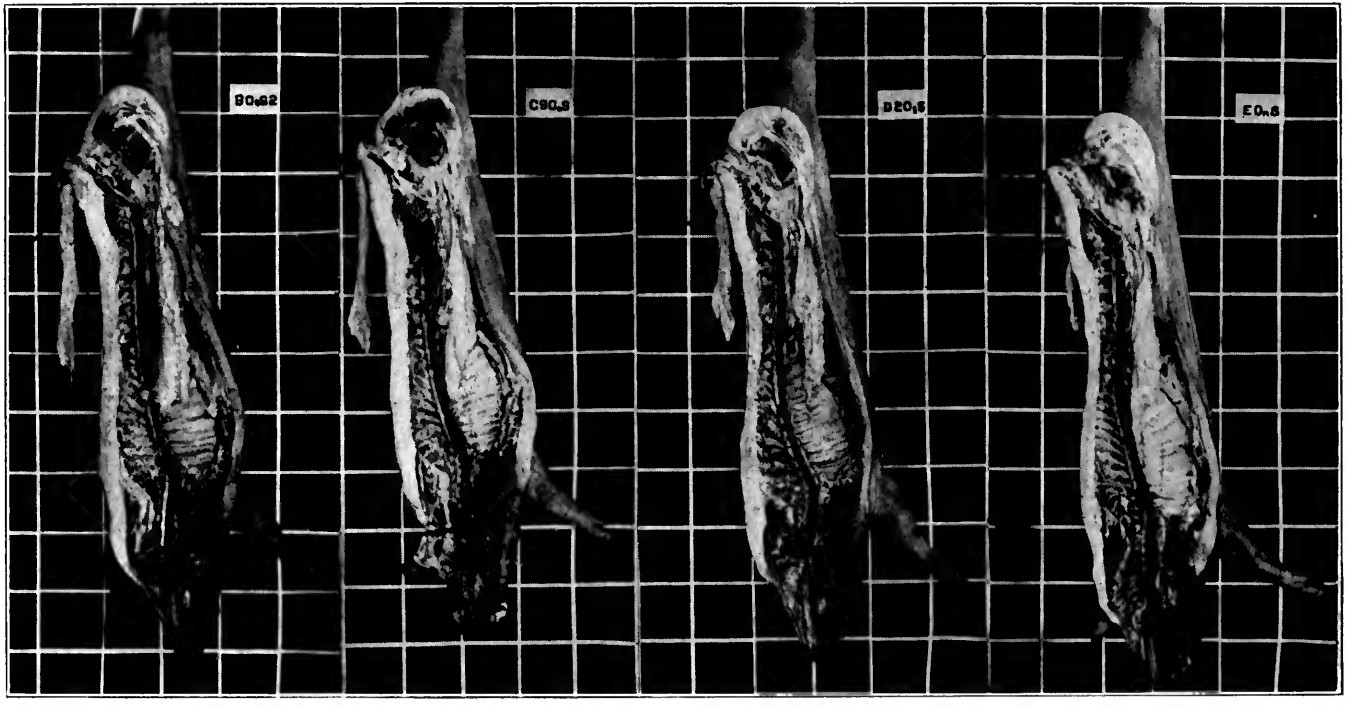


FIG. 12.—TYPICAL CARCASSES OF CHUFFY, INTERMEDIATE, RANGY, AND VERY RANGY HOGS SELF-FED TO 225 POUNDS

These carcasses are averages of the four types represented. Note that there are no extreme differences between the Chuffy, Intermediate, and Rangy types when self-fed, as was the case when these types were hand-fed (compare with Figs. 8, 10, and 11).

TABLE 15.—CARCASS MEASUREMENTS OF SELF-FED HOGS, 225-POUND WEIGHTS: SECOND EXPERIMENT

(Expressed in inches)

Hog No.	Live weight *lbs.*	Snout to rear toe	Snout to first thoracic vert.	First thoracic vert. to H-bone	H-bone to rear toe	Depth of chest	Depth of fat back	Circumference of fore shank	Length of foreleg
Chuffy									
40b	215.5	64.7	16.5	27.5	21.5	13.5	1.9	6.1	14.2
9s	215.3	67.6	17.2	28.6	22.0	13.2	1.7	6.5	13.9
10b	226.3	67.1	17.2	27.6	22.7	13.4	1.5	6.5	14.6
30b	234.5	67.7	17.2	29.0	22.2	13.5	1.7	6.0	13.7
0s	225.1	67.4	17.9	28.0	21.7	13.6	1.2	5.9	14.5
0b	227.8	65.0	16.6	27.1	22.1	13.6	2.1	5.6	13.0
10s	231.4	68.5	18.0	27.9	23.0	14.4	1.5	6.2	15.0
0b	246.4	66.5	17.2	28.0	22.5	15.2	2.0	5.9	14.7
96s	219.1	63.0	16.5	26.2	21.2	14.1	2.0	6.2	12.9
Average	226.8	66.4	17.2	27.8	22.1	13.8	1.7	6.1	14.1
Intermediate									
0s	217.4	66.1	17.4	28.2	22.0	14.4	2.2	6.2	14.0
30s	221.0	65.5	17.2	27.0	22.1	13.6	2.0	5.5	14.2
33s	224.7	67.2	18.0	27.5	22.2	13.6	2.1	5.9	13.5
60s	210.4	66.0	17.0	28.2	21.2	13.2	1.7	5.2	13.4
99b	230.9	66.5	17.2	28.0	22.2	13.4	1.7	5.9	14.5
30b	209.9	68.0	17.7	28.4	23.0	14.1	1.7	5.6	14.2
91s	217.0	64.4	16.7	27.2	21.2	13.1	1.7	5.6	13.5
90s	217.0	66.0	17.0	28.2	21.5	13.9	2.0	5.4	14.5
99s	219.1	63.1	17.2	27.0	20.2	14.5	2.0	5.7	13.5
Average	218.6	66.0	17.3	27.8	21.8	13.8	1.9	5.7	13.9
Rangy									
2b	216.4	69.2	16.9	29.5	23.2	13.4	1.7	5.5	13.7
9b	220.7	68.6	17.7	29.9	23.0	13.5	1.5	6.0	14.2
30b	217.2	71.0	17.4	29.4	24.8	13.4	1.4	6.0	16.2
90b	227.6	71.0	17.7	29.6	24.0	14.0	1.6	5.9	14.7
20b	220.7	67.2	17.2	28.5	22.5	14.0	2.0	5.9	14.9
99s	227.7	72.5	18.5	30.7	24.0	14.0	1.0	6.3	15.0
0b	224.4	76.1	19.0	32.0	25.5	13.1	.9	6.6	16.7
1b	225.9	67.9	18.1	28.5	24.0	14.2	2.0	5.5	15.0
3s	228.6	69.7	17.5	29.7	23.5	14.1	1.2	5.9	15.2
20s	225.9	70.0	17.5	29.2	23.6	13.5	1.5	5.5	14.9
Average	223.5	70.5	17.8	29.7	23.8	13.7	1.5	5.9	15.1
Very Rangy									
9b	218.1	73.2	17.5	31.0	25.1	13.9	1.2	6.6	16.1
30b	229.8	70.1	17.6	30.0	23.5	14.0	1.5	6.0	15.1
0s	219.1	76.2	19.2	32.1	25.4	13.1	1.0	6.6	16.4
0mb	235.3	73.5	18.9	30.5	25.2	14.0	1.5	6.2	15.5
93b	249.2	79.0	19.2	33.2	27.5	15.0	1.2	6.2	16.7
Average	230.3	74.4	18.5	31.4	25.3	14.0	1.3	6.3	16.0

greater than the lowest one of the Intermediate lot. The average of the Very Rangy lot was .2 inch less than the average of the Rangy lot. However, there was considerable overlapping of individuals in these two lots, making the difference insignificant.

Differences in the circumference of the fore shank were small and probably insignificant as between lots. Individual variations within the lots were great.

The "average" carcasses of the self-fed hogs slaughtered at 225-pound weights are shown in Fig. 12.

Hogs Slaughtered at 275 Pounds. All the hogs slaughtered at 275 pounds were hand-fed except the two Very Rangy ones. The individual and the average lot measurements are given in Table 16.

The average length of the Very Chuffy carcasses was 5 inches less than the average of the Intermediate carcasses, with no overlapping of individuals. The Intermediate carcasses were 2.9 inches shorter than the Rangy carcasses. Again there was no overlapping of individuals. The Very Rangy carcasses were 5.3 inches longer than the Rangy carcasses, with no overlapping of individuals, and there was a difference of 13.2 inches between the average lengths of the two extreme types.

In length of head and neck the Very Chuffy type was 1.5 inches shorter than the Intermediate type, with no overlapping of individuals. There were no significant differences between the Intermediate and Rangy types. The Very Rangy hogs were considerably longer in the head and neck.

In length of body the Very Chuffy carcasses were 2.0 inches shorter than the Intermediates, with no individuals overlapping. There was no significant difference between the Intermediate and the Rangy lots. The Very Rangy lot, however, was 3.6 inches longer than the Rangy, with no overlapping of individuals.

The hind legs of the Very Chuffy carcasses were 2.8 inches shorter than those of the Intermediate lot, with no overlapping of individuals. The average of the Intermediate lot was 1.5 inches less than the Rangy lot, with only one case of overlapping. There was no significant difference between the Rangy and Very Rangy types.

The forelegs of the Very Chuffy carcasses were 1.5 inches shorter than the Intermediate, with no overlapping of individuals. The Intermediates were 1 inch shorter than the Rangy carcasses, the shortest of the latter being the same as the longest of the former. The Very Rangy type was 1.2 inches longer than the Rangy type, with no overlapping of individuals.

There were no differences in depth of chest between the Very Chuffy, Rangy, and Very Rangy lots. For some unexplained reason, the Intermediates were deeper than any of the other lots.

The Very Chuffy and Intermediate carcasses carried the same

TABLE 16.—CARCASS MEASUREMENTS OF FOUR TYPES OF HOGS, 275-POUND WEIGHTS[1]: SECOND EXPERIMENT
(Expressed in inches)

Hog No.	Live weight lbs.	Snout to rear toe	Snout to first thoracic vert.	First thoracic vert. to H-bone	H-bone to rear toe	Depth of chest	Depth of fat back	Circumference of fore shank	Length of fore-leg
Very Chuffy									
5s	276.4	67.8	17.1	29.2	22.0	15.0	2.0	5.9	14.0
8b	268.8	66.0	17.0	27.2	21.4	14.6	2.0	5.6	13.4
Average	272.6	66.9	17.1	28.2	21.7	14.8	2.0	5.7	13.7
Intermediate									
12b	279.1	72.5	18.7	29.9	24.7	15.6	1.7	6.2	15.2
16b	276.5	70.7	17.5	30.2	23.4	15.6	2.2	5.6	15.0
17b	285.8	71.9	19.2	29.7	24.5	16.7	2.1	6.4	15.4
10s	283.9	72.5	19.0	30.7	25.5	....	1.9	6.0	15.0
Average	281.3	71.9	18.6	30.2	24.5	16.0	2.0	6.1	15.2
Rangy									
13b	269.0	75.2	19.1	31.0	25.9	14.0	1.5	6.2	15.4
3b	271.1	73.0	18.9	29.0	25.4	14.4	1.7	6.1	16.6
6b	280.2	76.0	19.7	31.0	26.5	15.5	1.5	6.5	17.0
1s	267.7	76.0	19.0	31.0	26.5	14.7	1.2	6.9	16.0
10b	275.6	74.0	19.0	30.1	26.0	15.6	1.7	6.9	16.2
Average	272.7	74.8	19.1	30.4	26.0	14.8	1.5	6.5	16.2
Very Rangy									
60b	286.9	79.7	20.0	33.2	26.5	14.5	1.5	7.0	17.1
0b	274.4	80.5	20.0	34.7	26.2	15.1	1.2	6.7	17.7
Average	280.7	80.1	20.0	34.0	26.4	14.8	1.4	6.9	17.4

[1]All the hogs were hand-fed except the Very Rangy type.

depth of back fat, with but little individual variation. Two of the Rangy carcasses had as much fat as the thinnest carcass of the Intermediate lot, but the average of the Rangy lot was .5 inch less. Both the Very Rangy carcasses were thinner than the Intermediate and Very Chuffy carcasses.

In the circumference of the fore shank the average of the two Very Chuffy hogs was .4 inch less than the average of the Intermediate lot. The average of the latter lot was .4 inch less than the average of the Rangy lot; however, there were two instances of overlapping. The average of the two Very Rangy hogs was .4 inch greater than the average of the Rangy lot, with overlapping between individuals.

The "average" carcasses of the Very Chuffy, Intermediate, Rangy, and Very Rangy types, slaughtered at 275 pounds are shown in Fig. 13.

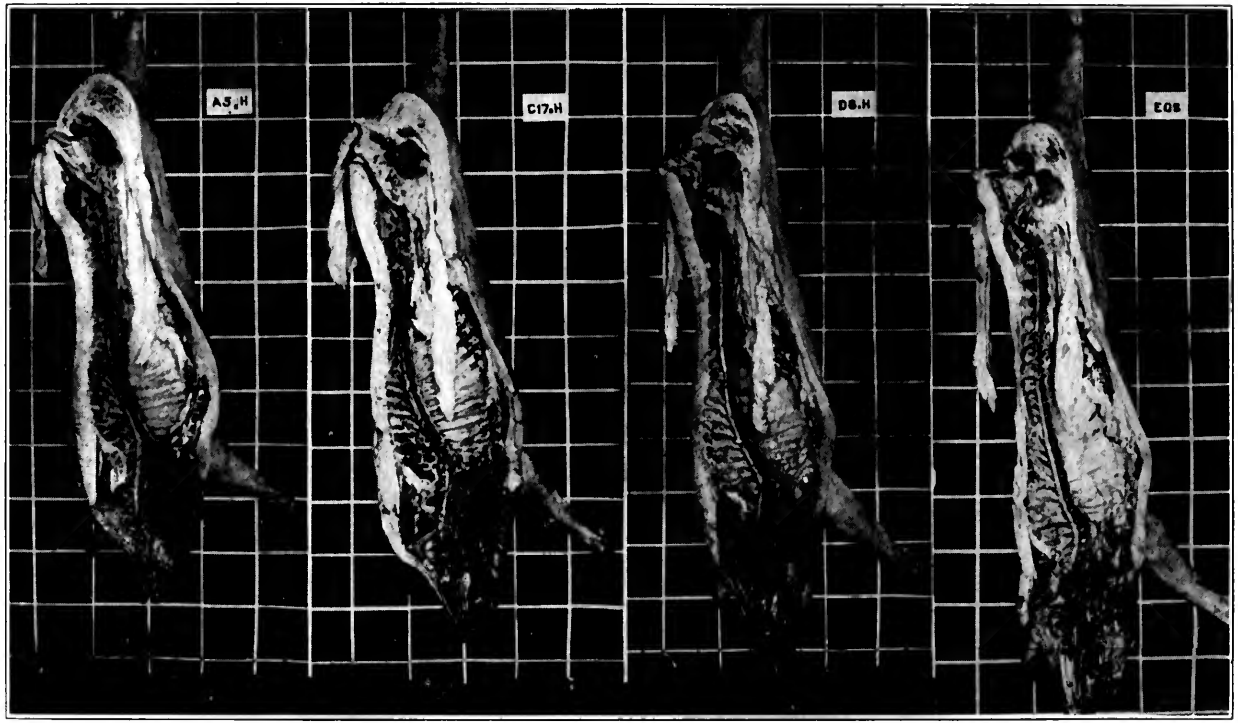


FIG. 13.—TYPICAL CARCASSES OF VERY CHUFFY, INTERMEDIATE, RANGY AND VERY RANGY HOGS SLAUGHTERED AT 275 POUNDS

These carcasses are in each case the average of the type represented. All but the Very Rangy hogs killed at this weight were hand-fed. The Very Rangy lot was self-fed.

Summary of Type Differences in Carcass Measurements. The Very Chuffy carcasses were considerably shorter than the Intermediate carcasses, regardless of the weight at which the hogs were slaughtered. Between the carcasses of the Chuffy and Intermediate types there was no difference in this or any other measurement. The Intermediate carcasses were considerably shorter than the Rangy carcasses in cases of hogs slaughtered at 225 pounds and 275 pounds. Also the Rangy carcasses were considerably shorter than the Very Rangy carcasses of hogs slaughtered at these weights.

Differences in length of carcass may be due to differences in length of head and neck, length of legs or length of body, or a combination of any or all of these factors. In the first year's experiment, pages 401 to 404, it was found that the greater length of the carcasses of the Rangy type was due to greater length of legs and of head and neck, the length of body being practically the same for all three types. In this second experiment, however, the length of legs, length of head and neck, and length of body all varied with the type of the hog.

No differences between types were found in depth of body. While there are many individual variations in depth of fat, the Very Chuffy type was deepest, the Chuffy and Intermediate types next, then the Rangy, and finally the Very Rangy.

Contrary to what one might expect, the differences in circumference of foreleg were rather small between lots and showed much individual variation.

CUTTING TEST

After the carcasses had thoroly cooled, the right half of each was cut into the wholesale cuts and the cutting percentages determined.

Hand-Fed Hogs Slaughtered at 175 Pounds. Individual cutting percentages and the average cutting percentages of the hand-fed hogs slaughtered at 175 pounds are given in Table 17. It is needless to discuss these results except in so far as apparently significant differences occur. In view of the small number of animals in the lots, any conclusions must be drawn with care. However, it seems safe to say that the picnics and feet of the Very Chuffy hogs were smaller than those of the Intermediate and Rangy hogs. The Very Chuffy carcasses had more trimmings, probably due to a larger amount of fat.

Hand-Fed Hogs Slaughtered at 225 Pounds. The average percentages of fat backs of the Very Chuffy and the Intermediate types were greater than those of the Rangy type, with only one case of overlapping between lots (Table 18). Also, the leaf fat was greater in the Very Chuffy and Intermediate types than in the Rangy type, with but little overlapping. The percentage of feet of the Very Chuffy type was lower than the Intermediate type which, in turn, was lower

TABLE 17.—CUTTING PERCENTAGES OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 175-POUND WEIGHTS: SECOND EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	Live weight	Right half	Fat back	Clear plate	Leaf fat	Ham	Picnic	Boston	Loin	Belly	Spare-ribs	Head	Feet	Neck bones	Kidney	Tail	Total trim	Total
							Very Chuffy											
	lbs.	*lbs.*																
18b.....	178.9	68.4	6.8	2.3	2.4	19.2	8.6	6.5	14.0	13.7	2.5	10.2	2.4	1.2	.3	.2	9.6	99.8
9s.....	183.8	70.9	6.9	2.5	2.6	19.5	9.6	5.2	13.8	15.8	2.2	10.0	2.2	1.1	.3	.1	8.1	100.0
20s.....	167.0	65.0	8.7	2.8	1.9	19.2	8.6	5.1	14.2	13.6	2.3	10.3	2.1	1.1	.4	.2	9.1	99.8
19b.....	178.9	70.5	8.5	3.1	2.5	19.5	8.6	5.5	13.4	14.8	2.2	9.8	2.3	.9	.3	.1	8.3	99.8
6b.....	168.9	65.9	6.4	2.5	2.3	20.3	9.4	6.6	13.4	13.7	2.3	10.0	2.6	1.1	.3	.1	8.8	99.9
16s.....	190.7	74.2	9.5	3.0	3.2	18.6	8.1	4.9	14.8	14.3	2.6	8.8	1.9	.7	.3	.1	8.5	99.3
Average.	178.0	69.0	7.8	2.7	2.5	19.4	8.8	5.6	13.9	14.3	2.3	9.9	2.3	1.0	.3	.1	8.7	99.8
							Intermediate											
13b.....	182.6	68.5	6.3	2.1	2.0	20.7	10.3	6.3	14.3	14.0	2.6	10.2	2.9	1.5	.3	.....	6.3	99.9
5s.....	170.9	64.0	6.8	2.3	2.5	19.6	9.9	5.9	13.8	14.4	2.4	11.3	2.8	1.6	.3	.2	6.5	100.2
3s.....	183.6	72.1	9.3	3.3	2.5	19.4	9.7	4.9	14.4	13.0	2.1	9.6	2.2	1.4	.4	.2	7.5	99.8
Average.	179.0	68.2	7.5	2.6	2.3	19.9	10.0	5.7	14.2	13.8	2.4	1.03	2.6	1.5	.3	.1	6.8	100.0
							Rangy											
14b.....	169.9	64.2	7.1	2.3	2.0	19.6	11.2	5.7	13.0	13.8	2.2	10.3	2.6	1.3	.4	.2	7.9	99.6
15b.....	188.2	71.8	7.3	2.6	2.1	20.2	9.3	6.4	14.8	12.9	2.2	9.3	2.9	1.7	.3	.1	7.6	99.9
20b.....	174.9	64.5	7.3	2.6	2.6	20.1	9.9	5.9	14.4	14.2	2.0	9.1	2.8	1.3	.4	.1	7.0	99.6
Average.	177.7	66.8	7.2	2.5	2.2	20.0	10.1	6.0	14.1	13.6	2.1	9.5	2.8	1.4	.3	.2	7.5	99.7

TABLE 18.—CUTTING PERCENTAGES OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: SECOND EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	Live weight *lbs.*	Right half *lbs.*	Fat back	Clear plate	Leaf fat	Ham	Picnic	Boston	Loin	Belly	Spare-ribs	Head	Feet	Neck bones	Kidney	Tail	Total trim	Total
Very Chuffy																		
15b	208.2	82.9	11.6	3.4	3.5	19.0	7.9	5.1	13.6	12.6	2.0	9.4	2.1	.9	.3	.1	8.2	99.8
11b	226.1	88.1	10.3	2.8	2.9	17.7	8.7	5.8	14.1	14.3	2.3	8.0	2.0	.9	.3	.1	9.6	99.9
17s	234.8	90.8	10.3	3.4	2.2	17.6	8.1	5.2	14.3	13.6	2.2	10.9	2.0	1.4	.3	.1	8.1	99.8
Average	223.0	87.3	10.8	3.2	2.9	18.1	8.3	5.4	14.0	13.5	2.2	9.5	2.0	1.1	.3	.1	8.6	99.9
Intermediate																		
18s	239.2	92.6	9.3	3.0	3.1	19.4	9.2	5.9	13.9	13.7	2.4	7.3	2.3	1.2	.2	.1	9.0	100.1
9b	224.0	85.3	9.8	2.6	3.5	19.0	9.0	6.5	14.2	12.1	2.3	9.1	2.3	1.0	.2	.1	8.3	100.0
15b	224.4	85.1	7.6	2.7	2.5	20.1	9.9	6.1	13.6	13.5	2.5	8.4	2.6	1.2	.3	.1	9.4	100.5
19b	223.8	87.8	10.1	3.4	2.5	19.2	9.3	5.5	13.5	14.9	2.0	8.0	2.4	1.2	.3	.2	7.8	100.3
2b	228.2	91.6	12.8	3.8	3.4	16.6	8.0	4.8	12.6	11.8	2.0	8.8	2.2	1.3	.4	.2	9.9	98.6
20s	235.0	91.6	11.3	2.7	2.8	17.2	7.9	5.5	15.0	13.4	2.5	8.1	2.1	2.1	.3	.1	9.0	100.3
1b	218.6	87.9	10.6	3.0	3.1	19.0	8.4	6.3	16.0	12.6	2.2	7.6	2.1	1.5	.3	.1	7.2	100.0
Average	227.6	88.9	10.2	3.0	3.0	18.7	8.8	5.8	14.1	13.2	2.3	8.2	2.3	1.4	.3	.1	8.6	100.0
Rangy																		
11b	240.4	93.2	9.3	2.5	3.3	18.0	8.8	5.2	15.0	12.3	2.0	9.2	2.8	1.8	.4	.2	8.5	99.4
16b	225.3	87.2	6.9	2.5	1.8	21.0	10.5	6.4	14.0	12.4	2.6	8.8	2.8	1.4	.3	.2	8.5	100.0
9s	228.4	87.0	8.2	2.2	2.4	19.4	10.2	5.9	15.0	12.7	2.4	8.5	2.6	1.4	.4	.3	8.3	99.9
8b	219.9	81.0	7.4	3.1	1.6	19.7	10.0	5.4	14.7	10.8	2.4	10.3	3.5	2.1	.3	.2	8.3	99.8
2b	221.1	88.5	8.8	2.8	2.0	17.6	8.1	5.6	14.9	13.3	2.3	9.6	2.9	1.4	.3	.2	8.8	98.6
5b	232.4	90.0	8.4	3.0	2.1	19.0	9.0	5.8	14.8	12.6	2.3	8.5	3.0	1.4	.3	.2	9.4	99.9
Average	227.9	87.8	8.1	2.7	2.2	19.1	9.4	5.7	14.7	12.3	2.4	9.2	3.0	1.6	.3	.2	8.6	99.6

TABLE 19.—CUTTING PERCENTAGES OF SELF-FED HOGS, 225-POUND WEIGHTS: SECOND EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	Live weight *lbs.*	Right half *lbs.*	Fat back	Clear plate	Leaf fat	Ham	Picnic	Boston	Loin	Belly	Spare-ribs	Head	Feet	Neck bones	Kidney	Tail	Total trim	Total
Chuffy																		
40b	215.5	87.5	9.4	3.8	2.4	17.7	9.5	4.3	12.1	14.0	1.9	9.5	2.7	1.1	.3	.2	10.1	99.1
9s	215.3	88.0	8.7	3.4	2.1	18.7	8.9	5.3	13.1	13.6	2.3	9.6	2.2	1.4	.3	.0	9.5	99.2
10b	226.3	89.5	9.8	3.3	2.0	18.5	9.3	5.2	12.5	12.0	2.4	11.0	2.6	1.1	.3	.1	8.7	99.0
0s	225.1	88.7	7.6	3.0	2.7	19.2	9.4	6.0	12.2	14.5	2.7	9.9	2.2	1.4	.3	.2	7.9	99.4
30b	234.5	90.7	8.8	2.6	1.9	20.0	8.8	4.8	11.7	15.5	2.3	10.7	2.3	1.2	.4	.1	8.5	99.6
0b	227.8	93 0	11.2	3.3	3.0	19.0	8.6	4.5	10.7	14.6	2.1	9.5	2.2	1.1	.3	.0	8.8	98.9
10s	231.4	93.3	8.9	3.4	1.6	18.9	9.6	5.7	13.6	12.2	2.0	10.2	2.8	1.2	.3	.2	9.0	99.6
0b	246.4	97.1	10.9	2.6	2.9	17.3	7.7	5.2	12.4	14.5	2.3	9.9	2.6	1.5	.3	.1	9.4	99.7
96s	219.1	90.5	11.5	4.3	2.7	14.6	8.7	6.1	10.5	13.2	1.9	11.5	2.2	1.5	.2	.1	10.7	99.8
Average	226.8	90.9	9.6	3.3	2.4	18.2	9.0	5.2	12.1	13.8	2.2	10.2	2.4	1.3	.3	.1	9.2	99.4
Intermediate																		
30s	221.0	87.2	10.4	3.6	2.6	17.3	9.3	4.5	12.0	15.4	2.5	9.3	2.1	1.5	.3	.1	8.2	99.3
0s	217.4	88.2	10.4	4.0	2.3	16.6	9.3	4.8	12.9	13.8	1.9	10.8	2.3	1.2	.3	.1	8.3	99.2
3s	224.7	89.5	10.9	3.4	2.4	18.1	8.5	5.1	12.2	15.5	1.9	9.2	2.3	1.4	.3	.0	8.9	100.2
99b	230.9	91.5	9.0	2.5	3.0	18.9	9.4	4.9	13.6	15.2	2.5	9.4	2.3	1.3	.3	.1	7.0	99.4
60s	210.4	81.5	11.8	3.6	2.1	17.4	9.2	4.4	13.0	14.7	2.6	8.9	2.1	1.2	.2	.0	7.8	99.1
30b	209.9	85.5	9.8	3.9	2.6	17.2	9.1	5.1	13.2	13.0	2.4	10.5	2.2	1.2	.3	.1	8.8	99.5
91s	217.0	85.3	9.3	2.5	2.4	19.9	9.3	5.6	14.3	12.6	2.5	8.8	2.4	1.2	.3	.1	8.6	99.7
90s	217.0	83.6	10.9	2.9	2.8	18.9	8.3	5.7	13.3	13.7	2.4	8.4	2.3	1.1	.2	.2	8.8	100.0
99s	219.1	85.5	14.3	4.6	2.1	17.1	7.5	5.1	12.3	12.4	1.9	9.6	2.3	1.2	.3	.1	9.0	100.0
Average	218.6	86.4	10.8	3.4	2.5	17.9	8.9	5.0	13.0	14.0	2.3	9.4	2.2	1.2	.3	.1	8.4	99.6

TABLE 19.—*Concluded*

Hog No.	Live weight *lbs.*	Right half *lbs.*	Fat back	Clear plate	Leaf fat	Ham	Picnic	Boston	Loin	Belly	Spare-ribs	Head	Feet	Neck bones	Kidney	Tail	Total trim	Total
Rangy																		
2b.....	216.4	84.5	10.1	3.7	2.0	18.3	9.5	5.6	12.6	14.8	2.2	9.7	2.3	1.2	.3	.1	6.9	99.6
9b.....	220.7	82.5	7 8	2.9	1.9	19.9	10.8	5.3	11.5	14.5	2.2	10.5	2.8	1.2	.4	.2	7.8	99.8
30b.....	217.2	84.0	7.9	2.9	2.3	19.3	10.3	5.1	12.1	14.7	2.7	9.3	2.8	1.5	.3	.2	7.6	99.1
90b.....	227.6	85.0	10.2	3.0	2.3	19.0	9.9	5.2	12.8	13.7	1.9	7.6	2.8	.8	.4	.2	9.3	99.3
20b.....	220.7	90.5	13.6	4.5	3.0	16.7	8.3	4.7	11.7	14.6	1.5	9.4	2.1	1.2	.3	.0	8.0	99.5
99s.....	227.7	87.2	7.3	2.9	1.6	19.2	10.0	6.1	13.7	11.9	2.4	9.7	3.0	1.5	.3	.2	9.9	99.8
1b.....	225.9	89.3	10.2	2.5	2.5	18.9	9.1	5.2	13.7	13.2	2.4	7.9	2.4	1.2	.3	.2	10.2	100.0
3s.....	228.6	89.0	10.3	3.1	2.4	19.8	9.2	5.9	14.5	11.8	2.4	8.2	2.6	1.2	.3	.2	8.0	99.8
20s.....	225.9	87.3	9.9	3.2	1.9	19.2	8.5	5.5	13.0	14.3	2.0	9.2	2.5	.9	.4	.1	8.8	99.7
0b.....	224.4	83.5	6.7	2.7	.8	19.7	11.4	7.1	14.3	12.3	2.4	10.1	3.7	1.3	.3	.3	6.9	100.1
Average.	223.5	86.3	9.4	3.1	2.1	19.0	9.7	5.6	13.0	13.6	2.2	9.1	2.7	1.2	.3	.2	8.4	99.7
Very Rangy																		
9b.....	218.1	83.0	7.1	3.1	1.7	18.9	10.8	5.4	13.5	13.9	2.3	10.5	3.5	1.6	.6	.3	6.7	100.0
30b.....	229.8	89.5	10.1	2.9	2.3	19.2	10.1	5.4	13.3	12.5	2.0	9.2	2.6	1.4	.2	.2	8.5	99.8
0s.....	219.1	82.1	5.6	2.4	1.3	20.4	10.4	6.3	14.6	11.8	2.6	11.5	3.6	1.8	.3	.2	7.2	99.9
0mb...	235.3	89.8	9.0	2.3	1.9	19.6	9.4	5.4	14.9	14.3	2.6	9.1	3.1	1.1	.5	.2	8.3	101.6
93b.....	249.2	94.7	9.2	2.4	1.8	19.0	9.5	5.7	15.7	10.8	2.6	8.5	3.1	1.9	.3	.2	8.9	99.7
Average.	230.3	87.8	8.2	2.6	1.8	19.4	10.0	5.6	14.4	12.7	2.4	9.8	3.2	1.6	.4	.2	7.9	100.2

TABLE 20.—CUTTING PERCENTAGES OF HOGS SLAUGHTERED AT 275-POUND WEIGHTS: SECOND EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	Live weight *lbs.*	Right half *lbs.*	Fat back	Clear plate	Leaf fat	Ham	Picnic	Boston	Loin	Belly	Spare-ribs	Head	Feet	Neck bones	Kidney	Tail	Total trim	Total
Very Chuffy: Hand-fed																		
5s.....	276.4	110.6	11.9	2.4	3.4	18.6	7.8	4.8	13.9	13.8	2.2	8.3	1.9	1.2	.2	.1	8.4	99.0
8b.....	268.8	110.1	11.5	3.2	4.3	15.9	7.7	5.5	12.8	14.6	2.1	8.8	1.9	1.4	.2	.1	10.1	100.1
Average.	272.6	110.3	11.7	2.8	3.9	17.3	7.7	5.1	13.3	14.2	2.1	8.5	1.9	1.3	.2	.1	9.2	99.5
Intermediate: Hand-fed																		
12b.....	279.1	113.1	10.7	3.3	3.4	18.9	8.3	6.1	13.1	12.3	2.4	9.0	2.5	1.3	.2	.2	8.2	99.9
16b.....	276.5	110.1	12.9	4.2	3.1	16.6	7.0	5.3	13.0	14.7	2.2	7.7	2.2	1.0	.2	.1	9.6	99.9
17b.....	285.8	114.6	11.5	4.3	3.5	16.1	8.1	4.8	12.3	12.0	1.9	10.6	2.2	2.3	.2	.2	9.7	99.6
10s.....	283.9	111.3	11.2	3.5	3.5	18.5	8.7	6.0	14.8	13.1	2.4	7.5	2.1	1.2	.3	.2	7.2	100.3
Average.	281.3	112.3	11.6	3.8	3.4	17.5	8.0	5.5	13.3	13.0	2.2	8.7	2.2	1.5	.2	.1	8.7	99.9
Rangy: Hand-fed																		
13b.....	269.0	108.8	9.5	3.1	3.0	17.8	8.6	5.9	13.1	14.1	2.1	9.4	2.8	1.1	.2	.2	8.8	99.8
6b.....	280.2	111.7	8.5	2.5	3.3	17.9	9.0	6.2	15.0	13.2	2.3	9.6	3.0	1.3	.2	.2	7.6	99.9
3b.....	271.1	109.8	10.9	3.4	3.0	17.1	8.6	5.5	13.7	12.8	2.1	9.4	2.5	1.1	.2	.1	9.1	99.8
10b.....	275.6	112.8	9.7	3.9	2.5	19.6	9.4	6.3	13.9	12.4	1.9	8.2	2.4	1.1	.2	.1	7.8	99.5
1s.....	267.7	108.4	7.1	2.8	1.9	20.4	9.9	6.9	13.3	12.0	2.3	8.4	2.6	1.2	.2	.1	11.3	100.4
Average.	272.7	110.3	9.1	3.1	2.8	18.6	9.1	6.2	13.8	12.9	2.2	9.0	2.7	1.1	.2	.1	8.9	99.9
Very Rangy: Self-fed																		
60b.....	286.9	113.0	9.9	3.5	1.9	18.2	9.6	5.4	13.3	12.1	2.4	9.6	3.1	1.5	.3	.2	8.9	100.1
0b.....	274.4	107.4	8.7	2.8	1.8	17.2	9.7	5.4	14.0	11.7	2.6	10.5	3.3	1.4	.3	.3	10.1	99.9
Average.	280.6	110.2	9.3	3.1	1.9	17.7	9.7	5.4	13.6	11.9	2.5	10.1	3.2	1.5	.3	.3	9.5	100.0

than the Rangy type. Again, there was little overlapping of individuals. The picnics of the Rangy type were greater than those of the Very Chuffy type, with only one case of individual overlapping. The percentage of belly in the Very Chuffy lot apparently was greater than in the Rangy lot, probably due to higher condition. There is an indication that the percentage of loin in the Very Rangy type was slightly higher than in the Very Chuffy type.

Self-Fed Hogs Slaughtered at 225 Pounds. There is an indication that the fat backs and clear plates of the Very Rangy hogs were less than those of the Intermediate hogs (Table 19). Also, the leaf fat of the Very Rangy hogs was less than in case of the Intermediate hogs. The picnics of the Very Rangy type were greater than those of the Intermediate type. The feet of the Very Rangy type were greater than those of the Rangy, and these, in turn, were greater than those of the Intermediate type. In general, the differences in cutting percentages of hogs of different types do not seem to be as marked when the hogs are self-fed as when they are hand-fed individually.

Hogs Slaughtered at 275 Pounds. All the hogs killed at 275 pounds were hand-fed individually, except the Very Rangy ones which were self-fed. Cutting percentages of the 275-pound hogs are shown in Table 20.

In amount of fat back there was no difference between the Very Chuffy and the Intermediate carcasses nor between the Rangy and the Very Rangy carcasses. However, the two latter types were distinctly lower than the two former types in this cut. In leaf fat, the Rangy carcasses were lower than the Very Chuffy and Intermediate carcasses, and the Very Rangy carcasses were lower than the Rangy ones. In picnics, the Rangy and Very Rangy carcasses were higher than the Very Chuffy and Intermediate. The percentage of feet was greatest in the Very Rangy type, next in the Rangy, next in the Intermediate, and lowest in the Very Chuffy. In bellies, the Very Chuffy, Intermediate, and Rangy carcasses were higher than the Very Rangy.

PHYSICAL COMPOSITION OF CUTS

The wholesale cuts (trimmed) and the total trimmings were divided as accurately as possible into lean, fat, skin, and bone, and the percentage of each in the various cuts was determined. These results are given in Tables 21 to 26.

Hand-Fed Hogs Slaughtered at 175 Pounds. Again the discussion will be confined to differences which apparently are significant (Table 21). The fat backs and clear plates of the Very Chuffy type contained less skin and were correspondingly fatter than those of the Intermediate and Rangy types. However, there were several instances of overlapping of individuals.

TABLE 21.—PHYSICAL COMPOSITION OF CUTS FROM HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 175-POUND WEIGHTS: SECOND EXPERIMENT

(Expressed in percentage of trimmed cut)

Hog No.	18b	20s	19b	9s	6b	16s	Aver.	13b	5s	3s	Aver.	14b	20b	15b	Aver.
	Very Chuffy							Intermediate				Rangy			
Fat back															
Fat	88.5	91.7	92.8	89.4	92.0	94.0	91.4	85.6	86.2	92.2	88.0	89.1	87.7	84.8	87.2
Skin	10.7	6.7	6.7	7.8	8.2	5.7	7.6	13.9	13.8	7.5	11.7	10.5	11.5	13.3	11.8
Clear plate															
Fat	91.1	94.0	93.7	92.6	90.8	88.9	91.8	88.3	85.0	94.2	89.2	92.7	89.8	86.8	89.8
Skin	8.2	6.6	5.4	5.7	9.1	11.1	7.7	12.4	11.6	6.2	10.1	8.7	10.8	11.6	10.3
Ham															
Lean	63.3	64.4	64.9	65.8	68.1	64.5	65.2	63.6	62.1	62.0	62.6	60.6	63.2	68.9	64.2
Fat	22.9	26.4	24.7	23.5	19.7	25.9	23.8	18.4	21.6	26.4	22.1	24.0	21.6	15.1	20.2
Skin	3.2	1.8	2.2	2.1	2.3	1.8	2.2	4.2	4.6	2.7	3.9	4.8	4.1	4.8	4.5
Bone	10.6	7.6	7.6	8.3	9.5	7.6	8.5	11.3	11.3	8.3	10.3	10.3	10.9	11.2	10.8
Picnic															
Lean	64.5	64.2	66.9	66.7	69.9	65.7	66.3	64.7	55.7	61.3	60.6	55.8	60.9	67.2	61.3
Fat	17.1	21.5	18.5	16.9	13.0	21.6	18.1	16.3	18.9	19.7	18.3	24.4	20.0	13.7	19.4
Skin	3.4	2.8	4.6	4.0	3.4	3.0	3.5	4.0	9.1	5.0	6.0	5.6	4.4	4.2	4.7
Bone	14.0	11.4	11.2	12.0	13.2	11.3	12.2	14.9	16.1	12.8	14.6	13.9	14.1	16.4	14.8
Boston															
Lean	86.5	85.6	85.7	86.6	86.0	87.1	86.3	82.2	78.4	91.5	84.0	77.5	82.7	90.6	83.6
Fat	8.5	9.3	8.3	8.1	9.3	11.5	9.2	13.2	16.0	5.6	11.6	20.5	11.3	4.8	12.2
Bone	4.5	8.4	5.2	5.4	4.9	4.9	5.5	4.6	5.3	4.2	4.7	4.1	5.2	5.2	4.9
Loin															
Lean	68.1	62.7	71.6	71.6	72.5	69.4	69.3	65.3	69.4	68.6	67.8	66.1	65.4	73.6	68.4
Fat	15.4	20.3	12.0	12.9	11.5	16.6	14.8	13.8	13.6	13.0	13.5	15.2	15.8	9.7	13.6
Bone	17.0	16.8	15.9	16.3	16.1	12.9	15.8	20.1	16.9	17.9	18.3	18.0	18.8	17.7	18.2

TABLE 21.—*Concluded*

Hog No.	18b	20s	19b	9s	6b	16s	Aver.	13b	5s	3s	Aver.	14b	20b	15b	Aver.
	Very Chuffy							Intermediate				Rangy			
Belly															
Lean	37.9	48.6	46.9	38.5	54.5	42.9	44.9	35.9	41.3	39.4	38.9	39.5	33.9	53.0	42.2
Fat	55.7	49.0	48.8	56.1	41.0	53.8	50.7	56.8	51.1	55.3	54.4	52.9	56.7	40.3	50.0
Skin	6.0	3.5	3.5	4.9	4.5	4.0	4.4	7.1	7.7	5.6	6.8	6.3	8.8	6.8	7.3
Spareribs															
Lean	58.8	66.7	69.1	57.5	53.3	68.2	62.3	59.0	57.9	69.1	62.0	55.0	54.5	57.5	55.7
Bone	39.4	34.0	31.6	40.5	37.3	30.8	35.6	40.4	43.4	35.5	39.8	42.9	42.4	42.5	42.6
Head															
Lean	27.4	30.7	28.9	28.8	27.8	22.2	27.6	32.3	27.0	31.9	30.4	28.5	30.8	27.5	28.9
Fat	33.3	25.1	34.0	33.0	30.9	40.6	32.8	20.4	29.7	29.0	26.3	31.2	22.2	28.3	27.2
Skin	11.1	18.9	13.3	15.0	16.2	13.0	14.6	20.5	16.5	14.2	17.1	16.7	22.2	15.8	18.2
Bone	26.4	24.5	23.4	23.6	25.0	23.7	24.5	26.6	26.2	25.4	26.0	23.0	24.8	27.8	25.2
Feet															
Skin	18.2	20.4	18.7	19.1	18.2	20.7	19.2	17.5	19.7	13.8	17.0	18.2	16.9	17.9	17.7
Bone	79.4	79.6	80.0	80.9	82.3	79.3	80.2	81.0	81.5	84.9	82.5	79.4	83.1	82.5	81.7
Neck bones															
Lean	32.9	37.8	35.5	31.2	50.0	54.0	40.2	33.0	33.0	35.7	33.9	55.3	26.8	37.2	39.8
Bone	63.4	62.2	67.7	66.2	69.4	66.0	65.8	64.1	64.0	61.2	63.1	52.9	70.7	62.0	61.9
Trimmings															
Lean	18.3	16.9	17.1	22.5	25.4	16.4	19.4	18.4	10.8	18.6	15.9	15.2	18.9	28.3	20.8
Fat	72.5	72.8	70.9	68.8	62.3	75.2	70.4	69.0	73.5	72.5	71.6	74.1	67.1	60.3	67.2
Skin	6.3	8.1	9.7	6.2	8.2	8.4	7.8	12.2	12.0	6.5	10.2	9.1	10.0	10.0	9.7
Bone	1.8	1.9	1.9	1.9	1.9	1.6	1.8	1.4	4.3	1.9	2.5	2.0	2.9	1.3	2.0

The hams of the Very Chuffy carcasses in most cases contained more lean, more fat, less skin, and less bone than those of the Intermediate and Rangy carcasses. The significance of these differences is doubtful, however, due to the small number and variation of individuals. Also, most of the Very Chuffy picnics contained more lean and less skin and less bone than those of the other two types. The loins of the Very Chuffy hogs contained less bone than those of the Intermediate and Rangy. In composition of bellies, the only difference was that the Very Chuffy bellies contained less skin than the others. The spareribs of the Rangy hogs contained more bone and less lean than those of the other types.

Most of the heads of the Very Chuffy type contained more fat than those of the Intermediate and Rangy hogs.

Hand-Fed Hogs Slaughtered at 225 Pounds. The hams of the Very Chuffy type contained less lean, more fat, and less skin than those of the Intermediate and Rangy types (Table 22). They also had 11 percent less bone than the Intermediate type. The Rangy hams had 24 percent more bone than the Intermediate type.

The picnics of the Very Chuffy pigs contained less lean, more fat, and less skin than those of the Intermediate and Rangy lots; they also contained 9 percent less bone than the Intermediate picnics, which contained 19 percent less than the Rangy picnics.

The bostons of the Very Chuffy pigs contained less lean and less bone than those of the other lots, while the bostons of the Rangy pigs contained less fat than those of the others. The loins of the Very Chuffy carcasses contained less lean and more fat than those of the other types, while the Rangy loins contained 9 percent more bone than the others.

The Very Chuffy bellies had less lean and more fat than the Intermediate and Rangy bellies. Three of the Rangy bellies were much higher in skin content than the others.

The spareribs of the Very Chuffy type had more lean and less bone than those of the Intermediate type, and these had more lean and less bone than those of the Rangy type. The heads of the Very Chuffy carcasses had less lean, more fat, and less bone than those of the other types. The neck bones of the Very Chuffy carcasses contained more lean and less bone than those of the other lots.

Self-Fed Hogs Slaughtered at 225 Pounds. The fat backs of the Very Rangy carcasses carried less fat and more skin than those of the other types—Chuffy, Intermediate, and Rangy (Tables 23 to 25). The same differences existed in the clear plates.

The Chuffy hams had less lean than the Very Rangy hams. Also, there is an indication that the Intermediate and Rangy hams had less lean than the Very Rangy hams. The Chuffy hams had more fat than

TABLE 22.—PHYSICAL COMPOSITION OF CUTS FROM HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: SECOND EXPERIMENT

(Expressed in percentage of trimmed cut)

Hog No.	11b	17s	Aver.	9b	18s	15b	19b	2b	20s	1b	Aver.	9s	16b	8b	2b	11b	5b	Aver.
	Very Chuffy			Intermediate								Rangy						
Fat back																		
Fat	93.5	93.0	93.2	93.4	89.4	92.3	94.1	95.1	92.9	93.0	92.9	90.8	90.9	89.0	94.6	93.3	92.7	91.9
Skin	5.5	6.9	6.2	6.9	8.2	7.9	5.9	6.8	6.7	7.2	7.1	9.1	10.5	11.3	7.5	7.2	7.3	8.8
Clear plate																		
Fat	92.0	92.5	92.2	91.1	93.6	92.9	91.0	93.0	91.3	91.4	92.1	92.7	91.7	91.5	93.9	91.5	91.4	92.1
Skin	7.2	6.6	6.9	8.9	6.4	7.0	8.0	7.0	7.9	8.2	7.6	7.8	9.2	8.5	6.1	8.5	8.2	8.0
Ham																		
Lean	61.6	60.0	60.8	66.5	64.2	67.1	65.4	59.2	66.2	67.5	65.2	63.4	67.4	63.4	64.3	63.4	63.2	64.2
Fat	27.8	29.4	28.6	22.2	24.0	20.7	21.8	28.3	23.1	21.6	23.1	20.9	20.0	18.8	23.0	23.3	23.6	21.6
Skin	2.2	2.4	2.3	2.3	2.9	2.0	3.3	3.3	2.5	2.5	2.7	3.3	1.9	3.3	2.6	2.8	2.6	2.7
Bone	7.7	8.1	7.9	7.8	8.3	9.4	9.3	9.2	8.2	7.9	8.6	9.7	9.9	13.0	10.7	10.7	10.4	10.7
Picnic																		
Lean	63.5	63.2	63.4	68.9	67.4	65.3	67.6	60.3	68.7	70.7	67.0	67.0	67.8	64.2	64.1	65.4	62.2	65.1
Fat	21.4	22.3	21.9	14.6	17.8	17.9	17.2	22.6	12.6	12.5	16.5	17.1	15.8	16.7	17.6	14.5	18.6	16.7
Skin	3.0	3.4	3.2	3.1	4.1	4.1	3.8	4.1	4.3	4.1	4.0	3.3	3.3	4.6	4.8	4.4	2.5	3.8
Bone	11.7	11.2	11.5	13.1	13.3	12.5	11.0	13.0	13.9	12.2	12.7	12.9	13.2	17.9	15.9	15.8	15.1	15.1
Boston																		
Lean	83.3	85.8	84.6	89.8	86.3	84.4	79.4	88.8	87.1	87.0	86.1	89.4	87.6	85.7	83.0	87.0	86.7	86.6
Fat	11.8	9.5	10.6	7.3	8.6	9.1	15.8	11.5	6.9	9.1	9.7	5.5	7.5	7.1	7.0	8.2	7.6	7.2
Bone	4.3	4.2	4.3	3.8	4.7	6.2	4.6	5.3	5.5	4.2	4.9	4.5	4.5	7.1	4.6	5.1	5.7	5.3
Loin																		
Lean	65.5	63.8	64.7	73.1	72.4	69.4	68.0	67.9	69.3	71.9	70.3	72.1	71.3	64.8	68.4	70.0	69.3	69.3
Fat	17.8	17.7	17.8	11.1	11.3	13.1	16.1	11.7	12.0	11.4	12.3	11.1	12.3	14.5	12.2	10.7	10.9	11.9
Bone	15.8	18.5	17.1	15.9	15.6	16.7	15.2	21.6	18.5	16.4	17.1	16.5	17.0	20.1	20.1	18.8	19.0	18.6

(Table concluded on next page)

TABLE 22.—PHYSICAL COMPOSITION OF CUTS FROM HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: SECOND EXPERIMENT—*Concluded*

(Expressed in percentage of trimmed cut)

Hog No.	11b	17s	Aver.	9b	18s	15b	19b	2b	20s	1b	Aver.	9s	16b	8b	2b	11b	5b	Aver.
	Very Chuffy			Intermediate								Rangy						
Belly																		
Lean	42.5	41.3	41.9	48.3	40.2	40.7	50.7	39.1	47.8	46.5	44.8	49.6	45.3	49.3	44.6	50.5	45.8	47.5
Fat	52.1	53.8	53.0	45.4	53.1	51.6	40.0	58.3	45.9	48.3	48.9	43.6	45.7	44.1	51.9	44.8	48.7	46.5
Skin	5.1	4.4	4.8	5.8	6.0	4.0	4.3	4.6	4.9	4.5	4.9	6.5	8.3	6.7	4.2	4.4	4.8	5.8
Spareribs																		
Lean	65.7	67.5	66.6	63.2	65.0	62.7	60.6	62.2	61.5	62.6	62.5	61.5	67.4	56.2	61.0	58.9	59.0	60.7
Bone	34.8	32.5	33.7	35.2	35.9	37.8	39.4	36.1	40.6	35.9	37.3	38.5	31.3	43.7	39.0	39.5	41.5	38.9
Head																		
Lean	18.4	27.6	23.0	33.5	29.0	33.1	33.6	34.9	34.0	37.6	33.6	31.6	32.5	26.9	32.7	21.6	18.9	27.4
Fat	50.8	38.2	44.5	23.6	30.5	30.7	27.1	23.7	24.8	26.3	26.7	29.6	27.9	31.1	24.7	31.3	42.3	31.2
Skin	15.6	13.1	14.3	16.1	16.0	12.3	14.4	15.4	16.1	15.8	15.2	16.1	14.7	14.5	14.1	16.6	13.0	14.8
Bone	15.3	21.2	18.2	26.7	23.8	23.7	26.9	24.7	25.5	21.8	24.7	26.9	26.1	24.2	28.2	30.2	26.0	26.9
Feet																		
Skin	21.8	17.8	19.8	19.0	17.6	17.7	16.4	19.4	20.8	13.5	17.8	21.7	16.3	15.8	17.3	17.1	20.0	18.0
Bone	78.2	81.7	79.9	80.0	81.9	81.8	83.6	91.7	80.2	86.5	83.7	78.3	82.0	84.6	82.7	81.7	80.0	81.5
Neck bones																		
Lean	43.4	50.0	46.7	38.5	31.2	40.0	37.0	32.3	36.9	41.7	36.8	41.0	34.7	40.1	36.0	51.2	39.2	40.4
Bone	52.6	47.7	50.2	62.6	65.2	58.1	63.0	66.1	62.6	56.8	62.1	57.4	66.1	59.3	68.0	48.8	61.5	60.2
Trimmings																		
Lean	15.5	22.4	19.0	25.2	20.6	11.8	23.1	18.7	20.5	26.8	21.0	24.2	21.2	19.6	26.8	21.5	18.9	22.0
Fat	74.6	68.9	71.8	66.4	68.1	76.7	66.6	72.7	70.6	63.8	69.2	65.7	69.6	63.8	64.5	67.1	71.0	67.0
Skin	7.6	6.8	7.2	6.8	8.4	7.5	8.8	6.9	7.2	8.0	7.7	8.3	7.8	13.3	8.1	8.9	7.2	8.9
Bone	1.4	1.9	1.7	1.1	2.0	1.6	1.5	1.6	1.7	1.6	1.6	1.4	1.3	3.0	1.7	2.4	2.4	2.0

the Very Rangy ones, and there is an indication that the Chuffy hams had more fat than those of the Intermediate and Rangy carcasses. Most of the Intermediate and Rangy hams were fatter than the Very Rangy. The Chuffy hams had less skin than the others. The Very Rangy hams had 39 percent more bone than the Chuffy and Inter-

TABLE 23.—PHYSICAL COMPOSITION OF CUTS FROM CHUFFY HOGS SELF-FED IN DRY LOT TO 225-POUND WEIGHTS: SECOND EXPERIMENT
(Expressed in percentage of trimmed cut)

Hog No.	40b	9s	10b	30b	0s	0b	10s	0b	96s	Aver.
Fat back										
Fat	91.1	92.1	91.9	92.5	92.6	93.3	92.8	90.0	94.0	92.3
Skin	6.8	8.0	7.2	7.2	7.4	6.1	7.2	8.4	5.3	7.1
Clear plate										
Fat	90.7	92.7	92.5	91.1	93.7	93.5	94.6	93.4	94.4	93.0
Skin	6.3	6.7	7.5	8.5	5.6	4.8	5.7	7.0	5.1	6.3
Ham										
Lean	55.9	58.4	60.1	59.7	62.6	58.0	61.5	61.4	54.1	59.1
Fat	28.1	30.5	28.3	30.5	26.8	32.8	26.8	26.2	34.9	29.4
Skin	4.1	2.1	2.8	2.2	2.5	2.1	2.3	3.3	1.9	2.6
Bone	11.0	8.5	8.9	7.1	7.9	7.0	8.2	8.9	7.9	8.4
Picnic										
Lean	59.4	59.1	57.7	53.0	66.5	60.6	57.5	59.5	50.6	58.2
Fat	23.0	25.5	26.3	31.8	19.2	23.7	26.2	24.0	36.7	26.3
Skin	4.3	4.5	3.7	3.1	3.0	3.7	2.3	4.0	2.8	3.5
Bone	10.6	11.5	12.1	11.2	11.4	10.6	12.5	12.6	9.5	11.3
Boston										
Lean	82.9	85.5	82.5	86.8	88.7	87.5	79.2	79.2	76.8	83.2
Fat	11.8	10.9	11.9	8.8	7.2	8.4	16.1	15.8	19.5	12.3
Bone	6.8	4.3	4.5	4.6	3.8	4.8	4.4	5.3	3.6	4.7
Loin										
Lean	62.7	63.2	67.4	70.3	72.5	66.5	68.2	69.6	58.2	66.5
Fat	22.4	19.9	15.2	12.3	10.2	18.0	14.1	12.7	25.3	16.7
Bone	14.6	15.8	17.8	16.8	17.1	15.5	17.0	19.1	16.1	16.6
Belly										
Lean	37.9	33.8	28.6	36.0	42.0	36.8	37.0	42.6	28.7	35.9
Fat	57.9	61.8	66.2	59.2	52.2	59.4	57.6	51.0	67.9	59.2
Skin	3.8	4.6	4.4	4.3	5.8	3.7	4.6	4.6	2.9	4.3
Spareribs										
Lean	58.5	63.4	63.3	68.3	65.8	75.9	66.0	61.4	69.8	65.8
Bone	33.5	35.6	32.6	35.1	32.9	33.3	33.5	39.5	32.0	34.2
Head										
Lean	14.7	18.3	23.0	22.9	16.5	24.4	22.2	26.9	17.3	20.7
Fat	42.0	37.9	39.8	47.5	46.0	40.9	45.1	37.3	57.2	43.7
Skin	21.5	16.0	15.3	11.1	13.7	12.5	13.1	15.0	10.4	14.3
Bone	21.4	22.5	21.1	17.8	24.5	21.0	19.1	20.7	14.2	20.3
Feet										
Skin	15.3	20.5	19.1	18.5	16.5	15.8	21.7	21.9	20.0	18.8
Bone	79.6	77.4	80.4	81.9	82.5	83.2	77.5	77.7	78.5	79.9
Neck bones										
Lean	36.8	38.5	39.6	29.1	40.0	42.0	33.0	47.3	44.4	39.0
Bone	57.9	61.5	59.4	68.2	52.0	53.0	65.2	53.4	51.8	58.0
Trimmings										
Lean	16.2	15.5	14.1	20.0	18.4	14.6	14.3	23.1	12.4	16.5
Fat	72.2	76.2	76.3	71.0	71.3	76.8	74.4	67.2	79.2	73.8
Skin	8.5	7.7	7.2	7.7	9.6	7.1	9.2	8.8	6.2	8.0
Bone	1.0	1.2	1.3	1.0	.7	1.2	1.8	1.1	1.0	1.1

mediate types, and the Rangy hams had 18 percent more bone than the Intermediate and Chuffy types.

The picnics of the Chuffy, Intermediate, and Rangy types were fatter than those of the Very Rangy type except in the case of one hog. Also, there is an indication that the Chuffy picnics were fatter than

TABLE 24.—PHYSICAL COMPOSITION OF CUTS FROM INTERMEDIATE HOGS SELF-FED IN DRY LOT TO 225-POUND WEIGHTS: SECOND EXPERIMENT

(Expressed in percentage of trimmed cut)

Hog No.	0s	30s	33s	60s	99b	30b	91s	90s	99s	Aver.
Fat back										
Fat	88.0	92.2	93.0	90.8	90.0	91.6	92.0	92.8	92.5	91.4
Skin	12.5	7.7	7.0	8.8	9.8	7.4	7.3	7.1	7.2	8.3
Clear plate										
Fat	85.4	92.4	92.1	93.1	88.9	93.1	92.9	93.1	93.4	91.6
Skin	8.4	6.3	6.6	6.9	10.2	7.2	8.6	6.9	6.5	7.5
Ham										
Lean	60.0	59.3	61.7	60.6	66.9	58.6	63.4	62.0	58.4	61.2
Fat	27.2	28.8	26.6	25.4	21.7	26.6	27.1	26.7	29.0	26.6
Skin	3.9	3.6	3.9	4.6	3.7	4.1	2.1	2.8	2.8	3.5
Bone	8.8	8.3	7.6	9.0	8.4	10.5	7.2	8.4	8.5	8.5
Picnic										
Lean	57.1	56.0	59.5	56.0	60.5	60.5	67.1	65.3	62.4	60.5
Fat	26.1	30.1	21.7	23.9	22.8	21.6	18.8	19.5	19.5	22.7
Skin	4.9	4.3	5.6	6.1	5.3	5.9	3.1	3.6	4.7	4.8
Bone	12.2	9.8	11.1	10.1	11.7	12.5	10.7	11.8	13.4	11.5
Boston										
Lean	83.6	85.8	80.2	84.5	83.2	85.7	88.8	84.3	81.3	84.2
Fat	10.9	8.9	14.9	9.9	12.4	9.1	6.9	10.9	11.5	10.6
Bone	5.9	5.1	5.3	5.6	4.6	5.7	4.4	4.2	4.8	5.1
Loin										
Lean	67.2	65.2	68.4	65.8	65.1	64.2	73.9	66.2	61.1	66.4
Fat	16.7	17.1	16.0	18.4	18.6	17.7	13.3	17.0	20.9	17.3
Bone	18.1	16.8	15.5	15.5	15.7	18.2	13.1	16.1	16.2	16.1
Belly										
Lean	36.2	30.0	34.6	40.4	40.2	36.3	48.2	41.3	43.0	38.9
Fat	57.9	64.5	58.6	55.2	54.0	58.5	46.8	53.4	53.0	55.8
Skin	5.6	5.2	7.0	4.6	5.4	4.9	4.6	4.2	4.0	5.1
Spareribs										
Lean	58.1	62.3	64.7	65.6	63.4	63.0	68.1	61.5	63.0	63.3
Bone	42.4	38.2	40.6	28.8	37.5	37.5	31.9	36.0	37.6	36.7
Head										
Lean	21.0	23.2	20.1	18.3	31.5	23.5	31.2	17.9	18.2	22.7
Fat	42.4	45.3	41.8	44.2	30.7	37.4	33.2	51.4	47.0	41.5
Skin	16.0	13.9	16.6	17.2	19.1	17.3	17.3	12.1	13.6	15.9
Bone	21.8	18.5	21.9	20.6	19.4	22.1	18.9	15.7	21.2	20.0
Feet										
Skin	18.9	19.1	17.6	17.6	13.5	19.7	21.7	22.1	24.0	19.4
Bone	82.5	82.0	81.4	82.3	82.7	79.8	77.8	77.9	76.0	80.3
Neck bones										
Lean	31.8	37.9	35.7	43.2	55.1	24.0	40.0	44.4	39.0	39.0
Bone	67.3	64.4	66.7	53.7	43.2	76.9	55.0	55.5	60.0	60.3
Trimmings										
Lean	13.5	6.0	10.1	17.5	23.4	14.0	19.7	18.0	16.6	15.4
Fat	75.0	82.9	78.6	73.1	64.2	73.4	71.9	73.2	72.8	73.9
Skin	10.6	8.4	10.0	9.4	11.2	9.5	6.9	7.0	6.9	8.9
Bone	1.1	1.7	.6	1.1	1.6	1.3	1.4	1.6	1.4	1.3

TABLE 25.—PHYSICAL COMPOSITION OF CUTS FROM RANGY AND VERY RANGY HOGS SELF-FED IN DRY LOT TO 225-POUND WEIGHTS: SECOND EXPERIMENT

(Expressed in percentage of trimmed cut)

Hog No.	2b	9b	30b	90b	20b	1b	0b	3s	20s	Aver.	9b	30b	0mb	93b	Aver.
	Rangy										Very Rangy				
Fat back															
Fat	92.0	91.5	90.8	92.0	90.6	92.5	84.4	92.0	92.2	90.9	80.9	92.5	87.9	86.3	86.9
Skin	7.8	8.5	9.0	7.6	6.5	7.4	15.6	7.9	8.1	8.7	17.5	7.2	12.8	13.2	12.7
Clear plate															
Fat	89.9	92.9	91.7	88.3	93.6	93.7	90.2	86.5	93.6	91.2	88.1	92.4	88.3	84.4	88.3
Skin	9.5	8.3	8.3	9.8	7.2	6.8	9.8	6.5	7.1	8.1	11.9	6.8	11.7	11.3	10.4
Ham															
Lean	50.7	61.4	63.0	59.8	58.4	64.5	65.0	60.7	58.7	60.3	63.6	62.0	63.3	65.3	63.6
Fat	36.5	23.9	21.9	24.3	28.3	23.7	17.2	26.4	30.4	25.8	19.1	25.8	21.0	20.2	21.5
Skin	2.7	3.3	4.9	4.3	4.3	3.0	4.1	2.4	2.4	3.5	4.8	2.6	3.4	3.4	3.5
Bone	9.2	10.9	10.1	10.5	9.1	8.4	13.2	9.9	8.3	10.0	12.7	9.0	11.9	13.1	11.7
Picnic															
Lean	50.3	55.3	57.9	57.9	51.3	64.9	63.9	62.6	59.9	58.2	59.5	58.6	59.2	65.5	60.7
Fat	32.9	26.4	23.1	24.3	30.0	18.4	15.0	18.4	24.0	23.6	15.4	24.9	18.3	10.5	17.3
Skin	4.0	4.5	4.4	4.7	6.0	3.7	4.4	3.7	3.7	4.3	7.3	3.8	4.2	5.5	5.2
Bone	12.4	13.5	13.3	12.5	13.9	12.6	16.8	14.7	13.4	13.7	15.9	12.6	18.6	17.9	16.2
Boston															
Lean	79.1	90.3	86.6	81.6	77.5	83.5	87.1	91.0	86.2	84.8	86.7	88.5	86.7	87.4	87.3
Fat	17.0	3.5	9.2	12.6	17.3	12.4	6.7	7.6	9.7	10.7	6.0	6.8	8.7	8.2	7.4
Bone	4.7	5.3	4.8	4.5	5.2	4.3	6.7	5.3	4.3	5.0	6.4	4.1	4.6	5.9	5.3
Loin															
Lean	63.7	63.5	60.7	69.2	67.6	67.2	66.5	71.3	65.7	66.2	66.5	69.9	69.6	69.0	68.8
Fat	19.2	17.9	19.2	14.6	16.8	18.0	13.4	8.9	16.7	16.1	10.3	12.8	9.4	10.0	10.6
Bone	16.9	17.9	19.7	16.1	17.0	13.9	19.7	19.4	16.9	17.5	22.3	16.8	20.5	21.0	20.1

(*Table concluded on next page*)

TABLE 25.—PHYSICAL COMPOSITION OF CUTS FROM RANGY AND VERY RANGY HOGS SELF-FED IN DRY LOT TO 225-POUND WEIGHTS: SECOND EXPERIMENT—*Concluded*

Hog No.	2b	9b	30b	90b	20b	1b	0b	3s	20s	Aver.	9b	30b	0mb	93b	Aver.
	Rangy										Very Rangy				
Belly															
Lean	35.1	30.5	33.5	37.4	30.2	44.7	52.4	42.0	40.5	38.5	44.3	....	46.7	50.9	47.3
Fat	59.8	63.4	59.0	56.6	65.0	50.8	38.3	51.6	54.9	55.5	46.3	....	45.6	42.7	44.8
Skin	4.4	5.5	7.3	5.6	4.9	4.2	8.7	5.2	4.8	5.6	9.5	....	7.3	5.8	7.6
Spareribs															
Lean	57.9	57.7	63.0	57.9	62.1	69.3	52.5	61.3	61.5	60.4	51.3	57.1	61.4	58.2	57.0
Bone	38.4	42.9	37.8	45.7	37.1	30.7	47.5	37.7	39.1	39.7	48.2	41.1	38.6	41.4	42.3
Head															
Lean	21.3	22.5	25.1	22.9	21.8	28.7	30.4	19.8	25.8	24.3	14.1	33.4	23.5	25.3	24.1
Fat	42.7	44.3	30.5	34.8	37.8	32.4	27.7	37.6	37.8	36.2	37.9	25.0	27.6	27.8	29.6
Skin	17.7	12.9	21.8	23.4	18.8	15.9	16.9	16.4	12.2	17.3	21.0	18.7	19.7	15.4	18.7
Bone	17.7	21.7	23.1	17.8	22.3	22.0	24.8	25.5	23.6	22.1	26.9	22.1	28.9	30.9	27.2
Feet															
Skin	19.5	19.1	16.4	17.0	21.3	22.9	16.1	17.2	18.3	18.6	17.2	17.4	20.9	15.2	17.7
Bone	78.5	77.9	82.8	83.4	79.3	76.1	83.9	82.4	80.8	80.5	79.3	81.7	81.9	83.7	81.7
Neck bones															
Lean	40.0	39.2	47.2	28.2	39.8	45.4	30.3	30.0	24.4	36.1	29.6	34.4	35.0	39.3	34.6
Bone	61.9	58.8	53.5	64.8	59.3	52.7	68.8	65.4	63.4	61.0	70.4	64.0	61.0	60.1	63.9
Trimmings															
Lean	9.0	12.1	13.0	18.1	21.4	25.1	33.1	17.6	20.6	18.9	15.4	16.2	22.1	23.2	19.2
Fat	80.9	75.7	75.8	70.6	68.3	63.8	52.6	71.1	70.8	70.0	65.5	73.9	62.1	58.9	65.1
Skin	6.3	10.8	9.4	8.8	9.7	9.1	11.2	9.1	7.2	9.1	16.6	8.0	12.1	11.3	12.0
Bone	2.0	.9	.8	.9	1.4	1.4	2.6	2.1	1.6	1.5	2.3	.8	2.7	2.3	2.0

the Intermediate and Rangy picnics. The Chuffy and Intermediate picnics had less skin than the Rangy and Very Rangy picnics. The Rangy picnics had 20 percent more bone than the Chuffy and Intermediate ones, and the Very Rangy picnics had 18 percent more than the Rangy picnics.

The Chuffy, Intermediate, and Rangy bostons contained less lean than the Very Rangy bostons. The Chuffy, Intermediate, and Rangy bostons were fatter than the Very Rangy bostons. The loins of the Very Rangy type apparently contained more lean and less fat than those of the other types. The Very Rangy loins, except in case of one hog, contained considerably more bone than those of the other types, containing 25 percent more than the Intermediates. Also, the Rangy loins apparently had about 9 percent more bone than those of the Chuffy and Intermediate types, altho in this there was considerable variation.

The Very Rangy bellies had more lean than those of the other types. Apparently the Intermediate and Rangy bellies had more lean than the Chuffy bellies. The Very Rangy bellies contained less fat than those of the other types, and the Intermediate and Rangy bellies apparently contained less fat than the Chuffy ones. The Chuffy bellies contained less skin than those of the other types, and the Intermediate bellies contained less than the Rangy bellies, which apparently contained less than the Very Rangy bellies.

The spareribs of the Chuffy and Intermediate hogs contained more lean and less bone than those of the Rangy and Very Rangy hogs.

The heads of the Chuffy and Intermediate types were fatter than those of the Rangy and Very Rangy types, while the Rangy heads were fatter than the Very Rangy heads. Altho the results are not conclusive, it is indicated that the Rangy and Very Rangy heads had more skin than the Chuffy and Intermediate heads. The Very Rangy heads had 36 percent more bone than those of the Chuffy and Intermediate types and, except in one case, more than the Rangy type. Also the Rangy heads probably contained more bone than the Chuffy and Intermediate.

The trimmings from the Very Rangy carcasses contained less fat than those from the Chuffy and Intermediate carcasses, and those from the Rangy carcasses probably contained less fat than those of the Chuffy and Intermediate types.

Hogs Slaughtered at 275 Pounds. Because of the small number of hogs in the lots slaughtered at 275 pounds, the results must be regarded as tentative rather than conclusive.

The fat backs of the Very Rangy type had more skin than those of the other three types (Table 26). Those of the Rangy type had more than those of the Very Chuffy and Intermediate types.

TABLE 26.—PHYSICAL COMPOSITION OF CUTS FROM HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 275-POUND WEIGHTS[1]: SECOND EXPERIMENT

(Expressed in percentage of trimmed cut)

Hog No.	5s	8b	Aver.	12b	16b	17b	10s	Aver.	13b	3b	6b	1s	10b	Aver	60b	0b	Aver.
	Very Chuffy			Intermediate					Rangy						Very Rangy		
Fat back																	
Fat	92.6	94.3	93.5	92.3	95.5	93.2	89.6	92.6	91.6	94.6	91.6	90.8	90.1	91.7	88.0	89.9	88.9
Skin	5.9	5.3	5.6	7.5	3.9	6.4	8.0	6.5	8.4	5.6	8.2	8.5	9.6	8.1	11.7	10.3	11.0
Clear plate																	
Fat	93.3	93.4	93.4	88.0	94.1	90.8	92.4	91.3	90.8	93.1	92.6	90.0	91.9	91.7	89.8	92.7	91.2
Skin	5.6	7.2	6.4	9.6	5.5	5.1	6.3	6.6	9.5	5.6	7.0	8.3	8.0	7.7	9.7	8.0	8.9
Ham																	
Lean	64.3	64.1	64.2	63.9	61.6	58.1	59.9	60.9	63.0	59.8	64.4	62.2	64.1	62.7	58.5	57.4	57.9
Fat	25.7	25.7	25.7	23.8	28.0	29.5	29.1	27.6	23.7	29.3	21.9	25.2	25.1	25.1	24.4	24.3	24.3
Skin	2.3	2.5	2.4	2.6	2.0	3.0	3.2	2.7	3.4	2.4	3.0	2.5	2.3	2.7	4.1	3.9	4.0
Bone	7.0	7.7	7.4	9.1	7.8	9.2	7.0	8.3	10.1	8.1	9.5	9.0	8.2	9.0	12.1	11.6	11.9
Picnic																	
Lean	69.6	66.9	68.2	60.4	61.5	59.3	68.6	62.4	66.3	61.8	65.5	67.1	63.0	64.8	58.9	58.3	58.6
Fat	15.1	18.9	17.0	20.3	22.7	23.9	18.0	21.2	16.7	22.8	17.6	16.8	21.2	19.0	20.9	19.6	20.3
Skin	3.5	3.2	3.3	4.8	2.5	3.8	2.9	3.5	3.9	3.2	3.3	3.3	3.0	3.3	4.6	5.4	5.0
Bone	10.7	11.2	11.0	14.4	12.3	12.9	10.5	12.5	13.3	11.7	12.4	12.1	11.5	12.2	14.8	16.2	15.5
Boston																	
Lean	88.6	80.6	84.6	85.3	83.5	82.1	76.3	81.8	85.2	81.8	85.6	85.5	91.3	85.9	83.8	86.7	85.2
Fat	6.1	14.6	10.3	10.2	12.0	11.8	18.7	13.2	10.2	13.2	10.1	8.7	6.3	9.7	10.3	8.5	9.4
Bone	4.7	5.0	4.9	5.0	4.3	4.5	4.5	4.6	4.7	4.1	3.6	4.7	3.5	4.1	6.1	5.1	5.6
Loin																	
Lean	71.7	68.3	70.0	66.3	64.4	66.4	68.8	66.5	68.2	66.9	68.3	66.6	70.2	68.0	68.1	66.8	67.5
Fat	12.3	16.0	14.2	15.0	19.8	17.1	17.9	17.4	13.6	14.6	15.3	14.9	13.7	14.4	13.0	11.3	12.1
Bone	14.7	14.8	14.7	17.2	15.3	17.9	13.3	15.9	17.5	15.2	15.9	17.6	16.2	16.5	18.3	21.1	19.7

[1]All types were hand-fed except the Very Rangy, which were self-fed.

TABLE 26.—*Concluded*

Hog No.	5s	8b	Aver.	12b	16b	17b	10s	Aver.	13b	3b	6b	1s	10b	Aver.	60b	0b	Aver.
	Very Chuffy			Intermediate					Rangy						Very Rangy		
Belly																	
Lean	53.9	43.7	48.8	41.4	38.3	39.0	39.9	39.6	42.5	41.6	47.3	44.2	49.1	44.9	43.7	44.8	44.3
Fat	40.8	52.4	46.6	53.2	57.9	56.5	54.2	55.5	52.9	54.0	46.9	52.3	45.9	50.4	49.2	46.9	48.0
Skin	4.2	3.6	3.9	4.7	3.1	3.6	5.5	4.2	4.2	3.9	5.1	4.2	4.3	4.3	6.7	8.0	7.3
Spareribs																	
Lean	64.5	68.0	66.2	66.2	65.7	56.0	71.2	64.8	63.5	64.3	65.4	63.2	77.3	66.7	55.2	63.7	59.4
Bone	33.5	32.9	33.2	34.9	33.5	42.6	28.1	34.8	36.5	34.0	33.1	35.6	27.3	33.3	44.8	36.7	40.7
Head																	
Lean	33.7	36.1	34.9	22.1	13.3	27.7	31.9	23.7	19.5	29.5	32.7	30.7	25.5	27.6	23.5	24.3	23.9
Fat	30.0	31.7	30.9	37.9	52.8	37.2	36.1	41.0	40.9	38.2	24.9	30.1	25.0	31.8	34.3	29.0	31.6
Skin	14.7	12.6	13.7	13.0	14.8	13.2	12.6	13.4	10.9	9.7	14.9	15.3	15.4	13.3	18.7	21.6	20.2
Bone	20.0	19.8	19.9	26.0	19.6	21.9	19.9	21.8	28.7	18.6	26.2	22.8	32.6	25.8	23.0	24.1	23.7
Feet																	
Skin	19.5	20.9	20.2	19.6	18.7	17.6	19.6	18.9	17.1	18.2	17.9	16.1	23.6	18.6	21.1	21.1	21.1
Bone	80.0	79.1	79.5	80.7	80.9	82.3	78.3	80.6	82.3	80.0	82.1	82.1	76.4	80.6	79.2	77.4	78.3
Neck bones																	
Lean	50.0	48.7	49.3	36.0	40.3	60.4	50.7	46.9	40.9	33.3	37.7	42.2	48.3	40.5	42.9	33.1	38.0
Bone	46.1	51.3	48.7	63.3	52.6	43.4	43.5	50.7	59.1	62.5	60.3	55.6	48.3	57.2	56.0	67.5	61.8
Trimmings																	
Lean	20.0	18.9	19.5	19.5	17.0	15.8	20.7	18.2	16.0	17.1	20.0	17.8	16.4	17.4	21.0	20.2	20.6
Fat	70.3	69.5	69.9	68.6	73.1	75.2	70.8	71.9	74.5	72.6	69.0	66.5	72.3	71.0	60.5	67.0	63.7
Skin	7.0	10.6	8.8	10.2	6.8	7.9	6.9	7.9	9.4	8.0	8.4	7.5	9.0	8.5	12.9	10.8	11.8
Bone	1.2	.7	1.0	1.7	1.9	.4	1.9	1.5	1.8	1.2	1.7	1.6	1.7	1.6	1.5	2.0	1.7

The Very Chuffy hams contained more lean than those of the Intermediate or Very Rangy types. The Intermediate and Rangy hams contained more lean than the Very Rangy hams. The Intermediate hams had more fat than those of the other types. The Very Rangy hams had more skin. The Very Chuffy hams had less bone than those of the other types and the Very Rangy hams had considerably more bone than those of the other types.

The pienics of the Very Chuffy carcasses contained more lean than those of the Intermediate and Rangy carcasses, while the Intermediate and Rangy picnics contained more lean than the Very Rangy ones. The Very Chuffy picnics contained less fat than those of the other types. The Very Rangy picnics contained considerably more skin and bone than those of the other types. Apparently the Rangy picnies had more bone than the Intermediate picnics, which had more than the Very Chuffy ones.

The bostons of the Intermediate lot appeared fatter than those of the Rangy and Very Rangy lots. The bone of the Very Rangy bostons was greater than that of the other lots. The Intermediate loins were fatter than those of the Rangy type, and the Rangy loins were fatter than those of the Very Rangy type. The Very Chuffy loins had the least amount of bone, the Intermediate and Rangy loins were about the same in this respect, and the Very Rangy loins had the largest amount of bone.

The Intermediate bellies had the least amount of lean and the greatest amount of fat. The Very Rangy bellies contained considerably more skin than any of the others. The spareribs of the Very Rangy type had more bone and less lean than those of the other types. The heads of the Very Chuffy lot had the largest amount of lean, the Rangy heads were next in this respect, and the Intermediate and Very Rangy heads were last. The Intermediate heads had the most fat, with the others about equal. The Very Rangy heads had considerably more skin than any of the others. The differenees in amount of bone are insignificant considering the error introduced in splitting the head.

The trimmings of the Very Chuffy, Intermediate, and Rangy carcasses were considerably fatter than those of the Very Rangy type. The latter, however, had considerably more skin. The Very Chuffy trimmings had less bone than the others.

Summary of Type Differences in Physical Composition. In general, the cuts of the hand-fed Very Chuffy carcasses contained less lean, less skin, less bone, and more fat than those of the Intermediate type. Many of the Very Chuffy cuts were too fat. The cuts of the Rangy type contained more bone, more skin, and less fat than the Intermediate cuts. There was no difference, however, in amount of lean. Many of the Rangy cuts were not fat enough.

TABLE 27.—PHYSICAL COMPOSITION OF CARCASSES OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 175-POUND AND 225-POUND WEIGHTS: SECOND EXPERIMENT

(Expressed in percentage of carcass weight)

Hog No.	Lean	Fat	Skin	Bone	Hog No.	Lean	Fat	Skin	Bone
175-POUND WEIGHTS									
Very Chuffy									
18b	44.4	37.1	4.8	12.4	6b	50.1	32.0	5.0	12.1
20s	44.5	38.7	4.9	11.1	16s	43.5	42.3	4.3	9.5
19b	45.7	38.3	4.6	10.4	Average	45.7	37.6	4.7	11.1
9s	46.1	37.0	4.7	11.3					
Intermediate									
13b	45.8	32.0	5.8	14.2	3s	43.9	38.8	4.8	11.6
5s	43.5	34.7	7.3	14.0	Average	44.4	35.1	6.3	13.3
Rangy									
14b	42.6	37.4	6.3	12.4	20b	43.5	35.3	6.8	13.1
15b	50.3	29.1	6.3	13.8	Average	45.5	33.9	6.4	13.1
225-POUND WEIGHTS									
Very Chuffy									
17s	42.0	42.0	4.6	10.7	Average	41.7	42.9	4.6	9.9
11b	41.4	43.8	4.6	9.1					
Intermediate									
9b	47.8	35.8	4.8	10.9	2b	37.6	44.1	5.0	11.6
18s	45.2	38.2	5.1	10.7	20s	45.4	37.5	4.8	11.9
15b	46.0	37.0	4.3	11.7	1b	48.4	36.0	4.5	10.6
19b	46.1	37.3	4.7	11.0	Average	45.2	38.0	4.7	11.2
Rangy									
11b	44.4	35.9	5.1	13.4	2b	44.7	35.7	4.8	13.6
16b	49.3	32.4	5.1	12.6	5b	44.0	35.1	4.6	13.2
9s	48.3	28.1	5.3	12.2	Average	45.9	33.2	5.2	13.4
8b	45.0	32.2	6.1	15.7					

In case of the self-fed hogs type differences in composition of cuts were not great so far as the Chuffy, Intermediate, and Rangy hogs were concerned. The cuts from the Very Rangy hogs, however, were much higher in content of skin and bone, some higher in content of lean and considerably lower in fat. The Very Rangy cuts were not fat enough.

PHYSICAL COMPOSITION OF CARCASSES

The physical composition of the carcasses has been calculated from the total weights of lean, fat, skin, and bone in each carcass. These results are shown in Tables 27 to 29. In the lots where the number of individuals was small, results must be regarded as tentative.

Hand-Fed Hogs Slaughtered at 175 Pounds. The percentages of lean in the carcasses of the types slaughtered at this weight—namely, the Very Chuffy, Intermediate, and Rangy—were practically the same for all types, with some individual variation. The Very

TABLE 28.—PHYSICAL COMPOSITION OF CARCASSES OF SELF-FED HOGS, 225-POUND WEIGHTS: SECOND EXPERIMENT

(Expressed in percentage of carcass weight)

Hog No.	Lean	Fat	Skin	Bone
Chuffy				
40b	36.6	44.2	5.9	10.6
9s	38.9	43.7	5.1	10.6
10b	38.4	43.3	5.2	11.2
0s	43.9	39.0	4.8	10.9
30b	40.6	43.5	4.5	10.1
0b	38.3	46.5	4.2	9.3
10s	40.7	41.9	4.8	11.0
0b	41.2	41.3	5.5	11.0
96s	32.2	53.8	4.0	8.8
Average	39.0	44.1	4.9	10.4
Intermediate				
30s	36.8	47.1	5.3	10.2
0s	37.8	43.4	6.6	11.2
33s	38.5	45.0	6.1	10.1
99b	44.3	38.3	6.0	10.4
60s	39.1	43.4	6.0	9.8
30b	38.7	42.6	6.0	11.7
91s	47.1	37.7	4.8	9.6
90s	41.4	43.3	4.5	9.6
99s	36.6	46.9	5.2	10.1
Average	40.0	43.1	5.6	10.3
Rangy				
2b	36.2	46.6	5.3	10.6
9s	39.8	41.4	5.6	12.2
30b	40.6	38.9	6.6	12.3
90b	40.2	40.9	6.2	10.7
20b	35.2	48.0	6.1	10.0
1b	44.6	39.4	5.1	10.0
3s	43.3	38.0	5.0	12.6
20s	41.2	42.3	4.7	10.9
0b	49.3	27.6	6.8	15.6
Average	41.1	40.3	5.7	11.7
Very Rangy				
9b	42.5	32.0	8.5	15.5
0mb	44.7	33.2	6.9	14.2
93b	46.4	32.9	6.1	15.5
Average	44.5	32.7	7.2	15.1

Chuffy carcasses were fatter than those of the other two types and contained approximately 27 percent less skin and 19 percent less bone than those of the other types.

Hand-Fed Hogs Slaughtered at 225 Pounds. With the exception of one carcass in the Intermediate lot, the carcasses of the Very Chuffy hogs contained less lean than the others, the average of the Very Chuffy carcasses being approximately 11 percent less than the other types. There was no difference between the Intermediate and Rangy types in this respect. Also, the Very Chuffy carcasses contained more fat than the other lots, with the exception of one carcass in the Intermediate lot. The average of the Very Chuffy type was 13 percent greater than the average of the Intermediate. The Intermediate carcasses contained 13 percent more fat than those in the Rangy lot.

With the exception of one carcass in the Intermediate lot, the Very Chuffy carcasses contained slightly less skin than those of the other

TABLE 29.—PHYSICAL COMPOSITION OF CARCASSES OF HOGS SLAUGHTERED AT 275-POUND WEIGHTS: SECOND EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	Lean	Fat	Skin	Bone
Very Chuffy: Hand-fed				
5s	45.5	38.7	4.3	9.0
8b	42.0	44.0	4.6	9.5
Average	43.8	41.3	4.4	9.2
Intermediate Hand-fed				
12b	41.7	40.5	5.1	11.7
16b	36.6	48.4	3.9	9.1
17b	37.9	45.5	4.7	10.9
10s	43.3	42.5	4.5	8.9
Average	39.9	44.2	4.6	10.2
Rangy: Hand-fed				
13b	41.9	40.5	5.0	12.1
6b	45.9	35.7	5.0	12.1
3b	40.8	43.4	4.1	10.1
10b	45.5	37.4	5.0	10.9
1s	45.9	36.5	4.7	11.5
Average	44.0	38.7	4.8	11.3
Very Rangy: Self-fed				
60b	41.3	37.2	7.1	13.1
0b	41.6	35.7	7.3	14.0
Average	41.5	36.4	7.2	13.6

types, while the Intermediate carcasses contained 9 percent less skin than those of the Rangy type, altho there was some overlapping of individuals.

The Very Chuffy carcasses contained 12 percent less bone than those of the Intermediate type. The Rangy carcasses contained 20 percent more bone than the Intermediate carcasses.

It is interesting to note that the Very Chuffy type contained 2.6 pounds more edible meat (lean and fat) per carcass than the Intermediate type, while the latter contained 4.7 pounds more edible meat per carcass than the Rangy type. The Intermediate carcasses contained as much lean as the Rangy ones in spite of the fact that they were considerably fatter.

Self-Fed Hogs Slaughtered at 225 Pounds. The Chuffy, Intermediate and Rangy carcasses contained practically the same amounts of lean. There is an indication that the Very Rangy carcasses contained a trifle more lean than those of the other types. There was little or no difference in the fat content of the Chuffy, Intermediate, and Rangy carcasses. However, the Very Rangy carcasses contained considerably less fat, approximately 23 percent less, than those of the other types.

There is an indication that the Chuffy carcasses contained less skin than the Intermediate and Rangy ones, there being no difference between the latter two. The Very Rangy carcasses, however, contained 26 percent more skin than the Intermediate and Rangy types.

The Chuffy and Intermediate carcasses showed no differences in amount of bone. There was an indication that the Rangy carcasses contained 13 percent more bone than the Chuffy and Intermediate carcasses. The Very Rangy carcasses contained considerably more bone than the others—about 40 percent.

The Chuffy, Intermediate, and Rangy carcasses averaged 9 pounds more edible meat per carcass than the Very Rangy carcasses.

Hogs Slaughtered at 275 Pounds. There were no distinct differences in the lean content of the carcasses of the Very Chuffy, Intermediate, Rangy, and Very Rangy types. In fat content the Intermediate carcasses ranked first, and the Very Chuffy second. The Rangy carcasses contained 12 percent less fat than the Intermediate, and the Very Rangy contained about the same as the Rangy.

In amount of skin there were no significant differences between the Very Chuffy, Intermediate, and Rangy carcasses. The two Very Rangy carcasses, however, were 56 percent higher.

In content of bone the Very Rangy carcasses were 20 percent higher than the Rangy carcasses. There were too few individuals and too much overlapping of individuals between lots to draw any conclusions regarding the other types.

GRADING OF CARCASSES

The carcasses were graded as to finish before they were cut up. A carcass of each type of hog slaughtered when weighing approximately 225 pounds, is shown in Fig. 14. These carcasses were not typical in all respects, but they do show the ranginess, coarseness, and lack of condition that characterized many of the Rangy and Very Rangy carcasses and the quality and finish of the other types.

In grading, both the firmness and amount of fat were considered. In general the finished carcasses were hard or firm, altho there were a

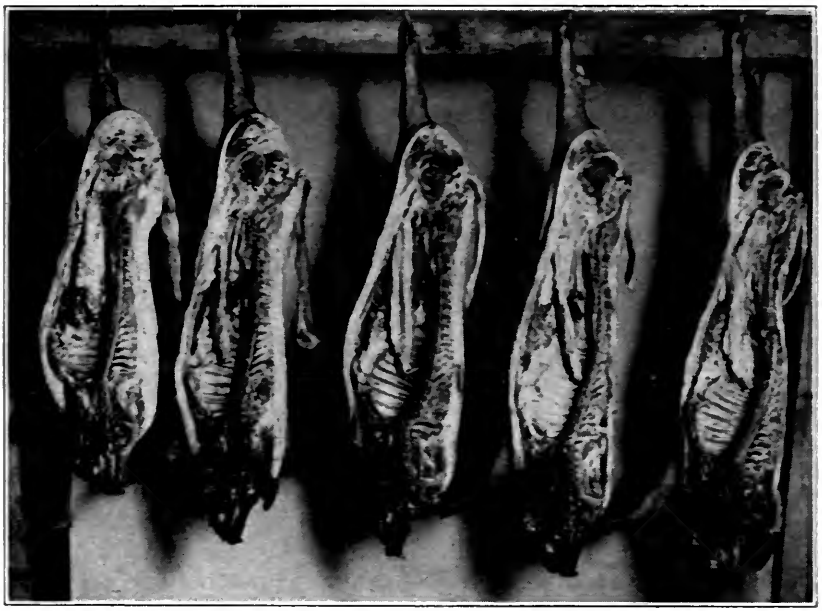


FIG. 14.—CARCASSES OF VERY CHUFFY, CHUFFY, INTERMEDIATE, RANGY, AND VERY RANGY HOGS FED TO 225 POUNDS

Note differences in form, quality, and condition of carcasses.

few exceptions as noted. The results of the grading are shown in Tables 30 to 33. For convenience in study, the depth of fat over the back and the percentage of fat in the carcass as separated by the knife is also added. From these data it will be noted that the finished carcasses usually contained 37 percent or more of fat as separated by the knife, while carcasses containing less than 37 percent of fat usually were unfinished.

Hand-Fed Hogs Slaughtered at 175 Pounds. Table 30 shows that of the 6 Very Chuffy carcasses, 2 were finished, 2 were almost finished,

and 2 were unfinished. All three of the Intermediate carcasses were unfinished and all three of the Rangy carcasses from hogs killed at this weight were unfinished.

TABLE 30.—GRADES OF CARCASSES OF HAND-FED HOGS, 175-POUND WEIGHTS: SECOND EXPERIMENT

Hog No.	Live weight	Depth of fat	Fat in carcass	Grade of carcass
		Very Chuffy		
	lbs.	*in.*	*pct.*	
18b	178.9	1.0	37.1	Soft, unfinished
9s	183.8	1.4	37.0	Trifle soft, almost finished
20s	167.0	1.2	38.7	Trifle soft, almost finished
19b	178.9	1.2	38.3	Hard, well finished
6b	168.9	1.0	32.0	Soft, unfinished
16s	190.7	1.7	42.3	Hard, well finished
Average	.....	1.3	37.6	
		Intermediate		
13b	182.6	1.0	32.0	Unfinished
5s	170.9	1.4	34.7	Unfinished
3s	183.6	1.7	38.8	Soft, unfinished
Average	.....	1.4	35.1	
		Rangy		
14b	169.9	1.2	37.4	Unfinished
15b	188.2	1.0	29.1	Very soft, unfinished
20b	174.9	1.1	35.3	Unfinished
Average	.....	1.1	33.9	

Hand-Fed Hogs Slaughtered at 225 Pounds. The three Very Chuffy carcasses were well finished (Table 31). Of 7 intermediate hogs killed at 225 pounds, 5 were well finished and 2 were unfinished. One carcass was criticised as rough. Six Rangy carcasses were all unfinished. The Rangy carcasses were quite deficient in percentage of fat as compared to the finished carcasses of the Very Chuffy and Intermediate hogs killed at these weights. Three of the Rangy carcasses were coarse and rough.

Self-Fed Hogs Slaughtered at 225 Pounds. The nine Chuffy carcasses were all well-finished (Table 32). None were criticised for lack of quality. The nine Intermediate carcasses also were all well finished. The self-fed Intermediates were considerably fatter than the carcasses of the same type which were hand-fed. One of the Intermediate carcasses was graded as rough. Of the ten self-fed Rangy carcasses, 5 were finished, 2 were almost finished, and 3 were unfinished. By

comparing this lot with the similar type which was hand-fed, it is seen that the self-feeding produced much fatter and better finished carcasses. Two of these carcasses were coarse and lacked quality. All five of the Very Rangy carcasses were unfinished and three of them were rough and coarse.

TABLE 31.—GRADES OF CARCASSES OF HAND-FED HOGS, 225-POUND WEIGHTS: SECOND EXPERIMENT

Hog No.	Live weight	Depth of fat	Fat in carcass	Grade of carcass
		Very Chuffy		
	lbs.	*in.*	*pct.*	
15b	208.2	2.1	....	Hard, very fat
11b	226.1	1.5	43.8	Hard, finished
17s	234.8	2.0	42.0	Hard, finished
Average	.....	1.9	42.9	
		Intermediate		
18s	239.2	1.7	38.2	Hard, finished
9b	224.0	1.5	35.8	Soft, unfinished, rough
15b	224.4	1.5	37.0	Unfinished
19b	223.8	1.7	37.3	Well finished
2b	228.2	2.0	44.1	Hard, finished
20s	235.0	1.7	37.5	Hard, finished
1b	218.6	1.6	36.0	Hard, finished
Average	.....	1.7	38.0	
		Rangy		
9s	228.4	1.6	28.1	Soft, unfinished
16b	225.3	1.0	32.4	Soft, unfinished, rough
8b	219.9	1.0	32.2	Unfinished
2b	221.1	1.5	35.7	Unfinished
11b	240.4	1.5	35.9	Soft, unfinished, rough
5b	232.4	1.1	35.1	Soft, unfinished, rough
Average	.....	1.3	33.2	

Hogs Slaughtered at 275 Pounds. The two Very Chuffy carcasses were well finished, as were also the four Intermediate carcasses (Table 33). Of the five Rangy carcasses, 3 were finished altho 2 of these were soft, and 2 were unfinished. One carcass lacked quality. The two Very Rangy carcasses, which were self-fed instead of hand-fed as in case of the other hogs killed at 275 pounds, were both unfinished and both very rough.

TABLE 32.—GRADES OF CARCASSES OF SELF-FED HOGS, 225-POUND WEIGHTS: SECOND EXPERIMENT

Hog No.	Live weight	Depth of fat	Fat in carcass	Grade of carcass
		Chuffy		
	lbs.	*in.*	*pct.*	
40b	215.5	1.9	44.2	Finished
9s	215.3	1.7	43.7	Finished
10b	226.3	1.5	43.3	Finished
0s	225.1	1.2	39.0	Finished
30b	234.5	1.7	43.5	Finished
0b	227.8	2.1	46.5	Finished
10s	231.4	1.5	41.9	Finished
0b	246.4	2.0	41.3	Finished
96s	219.1	2.0	53.8	Finished
Average	.....	1.7	44.1	
		Intermediate		
30s	221.0	2.0	47.1	Finished, rough
0s	217.4	2.2	43.4	Finished
33s	224.7	2.1	45.0	Finished
99b	230.9	1.7	38.3	Finished
60s	210.4	1.7	43.4	Finished
30b	209.9	1.7	42.6	Finished
91s	217.0	1.7	37.7	Finished
90s	217.0	2.0	43.3	Finished
99s	219.1	2.0	46.9	Finished
Average	.....	1.9	43.1	
		Rangy		
2b	216.4	1.7	46.6	Finished
9b	220.7	1.5	41.4	Finished
30b	217.2	1.4	38.9	Unfinished
90b	227.6	1.6	40.9	Soft, but finished
20b	220.7	2.1	48.0	Soft, but finished
99s	227.7	1.0	....	Soft, unfinished
0b	224.4	.9	27.6	Very soft, unfinished, lacks quality
1b	225.9	2.0	39.4	Finished, lacks quality
3s	228.6	1.2	38.0	Little soft, not quite finished
20s	225.9	1.5	42.3	Little soft, not quite finished
Average	.....	1.5	40.3	
		Very Rangy		
9b	218.1	1.2	32.0	Soft, unfinished
30b	229.8	1.5	....	Unfinished, rough
0s	219.1	1.0	....	Soft, unfinished, rough
0mb	235.3	1.5	33.2	Soft, unfinished
93b	249.2	1.2	32.9	Soft, unfinished, rough
Average	.....	1.3	32.7	

TABLE 33.—GRADES OF CARCASSES OF HOGS SLAUGHTERED AT 275-POUND WEIGHTS: SECOND EXPERIMENT

Hog No.	Live weight	Depth of fat	Fat in carcass	Grade of carcass
		Very Chuffy: Hand-fed		
5s	276.4	2.0	38.7	Well finished
8b	268.8	2.0	44.0	Well finished
Average	.....	2.0	41.3	
		Intermediate: Hand-fed		
12b	279.1	1.7	40.5	Well finished
16b	276.5	2.2	48.4	Well finished
17b	285.8	2.1	45.5	Well finished
10s	283.9	1.9	42.5	Well finished
Average	.....	2.0	44.2	
		Rangy: Hand-fed		
13b	269.0	1.5	40.5	Soft, but finished
3b	271.1	1.7	44.3	Finished, trifle soft
6b	280.2	1.5	35.7	Not quite finished, soft
1s	267.7	1.2	36.5	Soft, unfinished, rough
10b	275.6	1.7	37.4	Finished
Average	.....	1.5	37.5	
		Very Rangy: Self-fed		
60b	286.9	1.5	37.2	Soft, unfinished, rough
0b	274.4	1.2	35.7	Soft, unfinished, rough
Average	.....	1.4	36.4	

GRADING OF BELLIES

The bellies were graded immediately after cutting, taking into consideration quality and finish. These results are given in Tables 34 and 35.

Bellies of Hand-Fed Hogs Slaughtered at 175 Pounds. Four of six Very Chuffy bellies were graded as choice and finished, the other two being slightly underdone. The three Intermediate bellies were all unfinished, as were the three Rangy bellies. Fig. 15 shows a belly of each type.

Bellies of Hand-Fed Hogs Slaughtered at 225 Pounds. Two of the Very Chuffy bellies were choice and finished while the other one, which came from a hog weighing only 208 pounds, was too fat. One Intermediate belly was unfinished, one was overdone, and five were graded as choice. The six Rangy bellies were all unfinished, altho one was almost done. One was graded as rough (Fig. 16).

Bellies of Self-Fed Hogs Slaughtered at 225 Pounds. Three of the Chuffy bellies were too fat and the other six were choice. Seven of the Intermediate bellies were finished and graded choice. The other two were too fat. Four of the Rangy bellies were unfinished, one of them being rough and coarse. The other six were finished but one of them was rough. All five of the Very Rangy bellies were decidedly thin and unfinished and three of them were rough (Fig. 17).

Bellies of Hogs Slaughtered at 275 Pounds. One of the Very Chuffy bellies was choice, the other was too fat. Three of the Intermediate bellies were too fat, the other was choice. Two of the Rangy bellies were too heavy, one of these being rough; two were unfinished, and the remaining one was finished but graded only good. One of the Very Rangy bellies was finished while the other was unfinished; both were rough and coarse (Fig. 18).

TABLE 34.—GRADES OF BELLIES FROM HAND-FED HOGS, 175- AND 225-POUND WEIGHTS: SECOND EXPERIMENT

Hog No.	Fat in belly	Grade of belly	Hog No.	Fat in belly	Grade of belly
175-POUND WEIGHTS			225-POUND WEIGHTS		
Very Chuffy					
	pct.			*pct.*	
18b	55.7	Choice, finished	15b	....	Too fat
9s	56.1	Choice, finished	11b	52.1	Choice, finished
20s	49.0	Not quite finished	17s	53.8	Choice, finished
19b	48.8	Choice, finished			
6b	41.0	Not quite finished	Average	53.0	
16s	53.8	Choice, finished			
Average	50.7				
Intermediate					
13b	56.8	Fair, unfinished	18s	53.1	Choice, finished
5s	51.1	Trifle unfinished	9b	45.4	Good, unfinished
3s	55.3	Unfinished, very seedy	15b	51.6	Choice, finished
			19b	40.0	Choice, finished
Average	54.4		2b	58.3	Too fat
			20s	45.9	Choice, finished
			1b	48.3	Choice, finished
			Average	48.9	
Rangy					
14b	52.9	Good, unfinished	9s	43.6	Unfinished
15b	40.3	Soft, unfinished	16b	45.7	Good, unfinished
20b	56.7	Unfinished	8b	44.1	Soft, unfinished
			2b	51.9	Choice, slightly unfinished
Average	50.0		11b	44.8	Good, unfinished
			5b	48.7	Rough, unfinished
			Average	46.5	

TABLE 35.—GRADES OF BELLIES FROM FIVE TYPES OF HOGS SLAUGHTERED AT 225- AND 275-POUND WEIGHTS[1]: SECOND EXPERIMENT

Hog No.	Fat in belly	Grade of belly	Hog No.	Fat in belly	Grade of belly
225-POUND WEIGHTS Chuffy			275-POUND WEIGHTS Very Chuffy		
	pct.			*pct.*	
40b	57.9	Choice, finished	5s	40.8	Choice, finished
9s	61.8	Choice, finished	8b	52.4	Too heavy for choice
10b	66.2	Choice, finished			
0s	52.2	Choice, finished	Average	46.6	
30b	59.2	Too fat			
0b	59.4	Choice, finished			
10s	57.6	Seedy, too fat			
0b	51.0	Choice, finished			
96s	67.9	Fair, too fat			
Average	59.2				
Intermediate					
30s	64.5	Too fat	12b	53.2	Choice, finished
0s	57.9	Choice, finished	16b	57.9	Too fat
33s	58.6	Choice, finished	17b	56.5	Good, too fat
99b	54.0	Choice, finished	10s	54.2	Good, too fat
60s	55.2	Seedy, too fat			
30b	58.5	Choice, finished	Average	55.5	
91s	46.8	Choice, finished			
90s	53.4	Choice, finished			
99s	53.0	Choice, finished			
Average	55.8				
Rangy					
2b	59.8	Good, finished	13b	52.9	Not quite finished
9b	63.4	Finished	3b	54.0	Finished, coarse, too heavy
30b	59.0	Rough, finished	6b	46.9	Good, finished
90b	56.6	Unfinished	1s	52.3	Good, finished, too heavy
20b	65.0	Choice, finished	10b	45.9	Unfinished
99s	....	Unfinished			
0b	38.3	Unfinished, rough	Average	50.4	
1b	50.8	Unfinished			
3s	51.6	Choice, finished			
20s	54.9	Choice, finished			
Average	55.5				
Very Rangy					
9b	46.3	Thin, unfinished	60b	49.2	Finished, rough, too heavy
30b	....	Thin, unfinished, rough	0b	46.9	Unfinished, rough
0s	....	Thin, unfinished, soft, rough			
0mb	45.6	Very thin, unfinished	Average	48.0	
93b	42.7	Unfinished, rough			
Average	44.8				

[1]The 225-pound hogs were all self-fed; the 275-pound hogs were hand-fed, except the Very Rangy type.

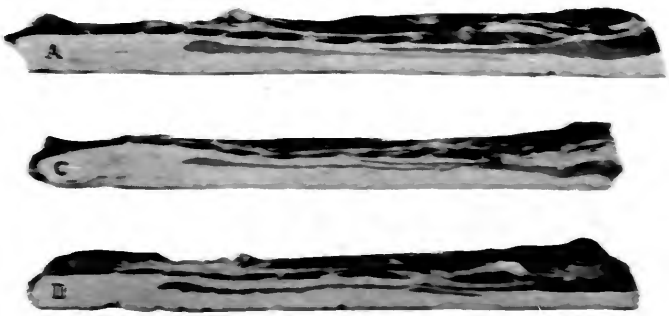


FIG. 15.—BELLIES OF 175-POUND HAND-FED HOGS

The top belly, from a Very Chuffy hog, graded choice. The middle belly, from an Intermediate hog, is unfinished, as is also the last one, from a Rangy hog.

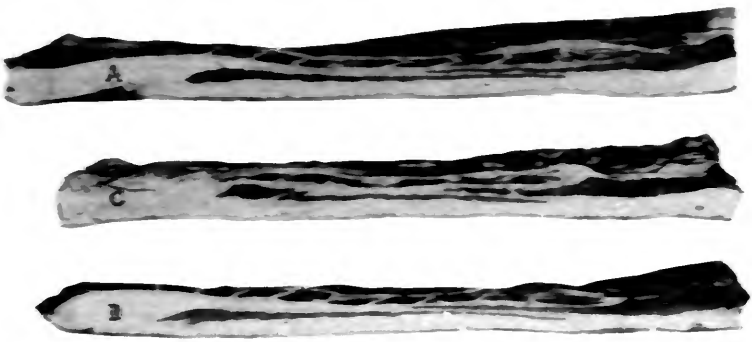


FIG. 16.—BELLIES OF 225-POUND HAND-FED HOGS

The top belly is from a Very Chuffy and the second from an Intermediate hog. These two graded choice. The last one, from a Rangy hog, is unfinished.

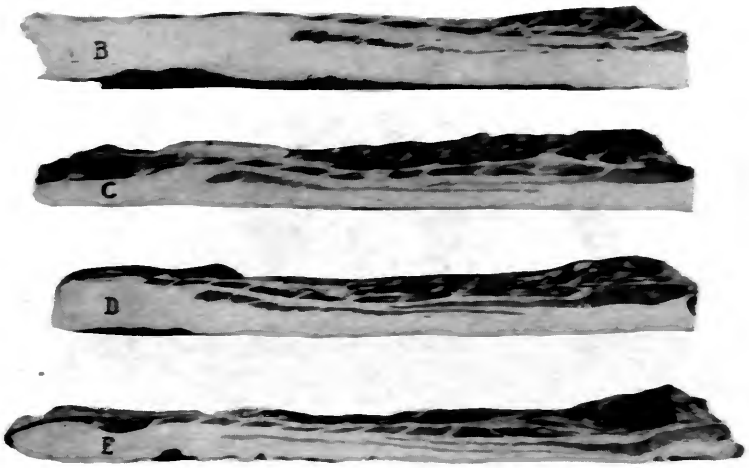


FIG. 17.—BELLIES OF 225-POUND SELF-FED HOGS

The top belly is from a Chuffy, the second from an Intermediate, the third from a Rangy, and the fourth from a Very Rangy hog. The Chuffy belly is too fat, the Intermediate and Rangy are choice, and the Very Rangy is quite deficient both in finish and in quality.

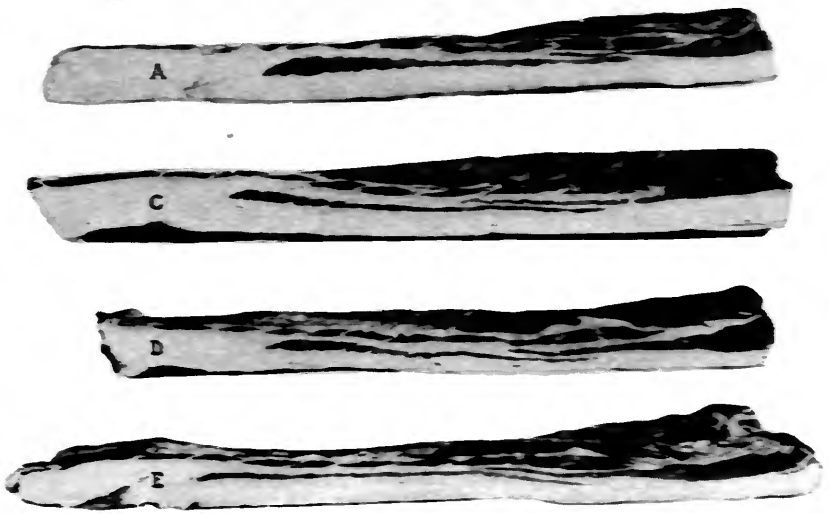


FIG. 18.—BELLIES OF 275-POUND HOGS

The top belly is from a Very Chuffy, the second from an Intermediate, the third from a Rangy, and the last from a Very Rangy carcass. The Very Chuffy belly is choice, the Intermediate is too fat, the Rangy is good, being a little rough, and the Very Rangy is finished but very rough.

GRADING OF THE OTHER CUTS

No attempt was made to grade the other cuts, but it was noted that the Very Chuffy and most of the Chuffy hams and picnics were very

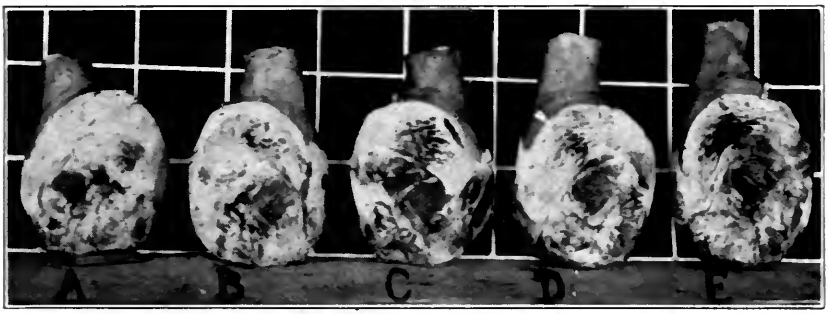


FIG. 19.—HAMS FROM HOGS OF DIFFERENT TYPES

From left to right these hams are from Very Chuffy, Chuffy, Intermediate, Rangy, and Very Rangy hogs slaughtered at 225 pounds. While there were no differences in the percentages of hams cut from the various lots, there were great differences in quality.

FIG. 20.—PICNICS FROM HOGS OF DIFFERENT TYPES

From left to right these picnics are from Very Chuffy, Chuffy, Intermediate, Rangy, and Very Rangy hogs. Note differences in length of shank.

short, thick, fat, and short in the shank. Many of them were too fat. Some of the Rangy hams and picnics were long in the shank, thin, and not fat enough. This was especially true of the picnics from the hand-fed Rangy hogs. The Very Rangy hams and picnics were especially long in the shank, narrow and lean. The amount of variation in the hams is shown in Fig. 19, and a picnic from each type from hogs slaughtered at 225 pounds is shown in Fig. 20.

The loins of the Rangy hogs were longer and thinner, and those of the Chuffy hogs were shorter and thicker, than those of the Intermediate type, altho there was no difference in cutting percentage. In general, cuts of self-fed hogs were fatter than cuts of hand-fed hogs of the same type.

THIRD EXPERIMENT

COMPARISON OF INTERMEDIATE AND RANGY HOGS HAND-FED AND SELF-FED TO 225-POUND WEIGHTS

This experiment was confined to a comparison of two types, Intermediate and Rangy, inasmuch as these had proved superior to the other types in the previous experiments. Eighteen Intermediate hogs and 17 Rangy hogs were hand-fed similarly to the hand-fed lots of the two previous experiments. In order to obtain a comparison of the two types when fed on pasture, 18 Intermediate and 17 Rangy hogs were self-fed on alfalfa pasture. All hogs were slaughtered at approximately 225 pounds.

DRESSING PERCENTAGES

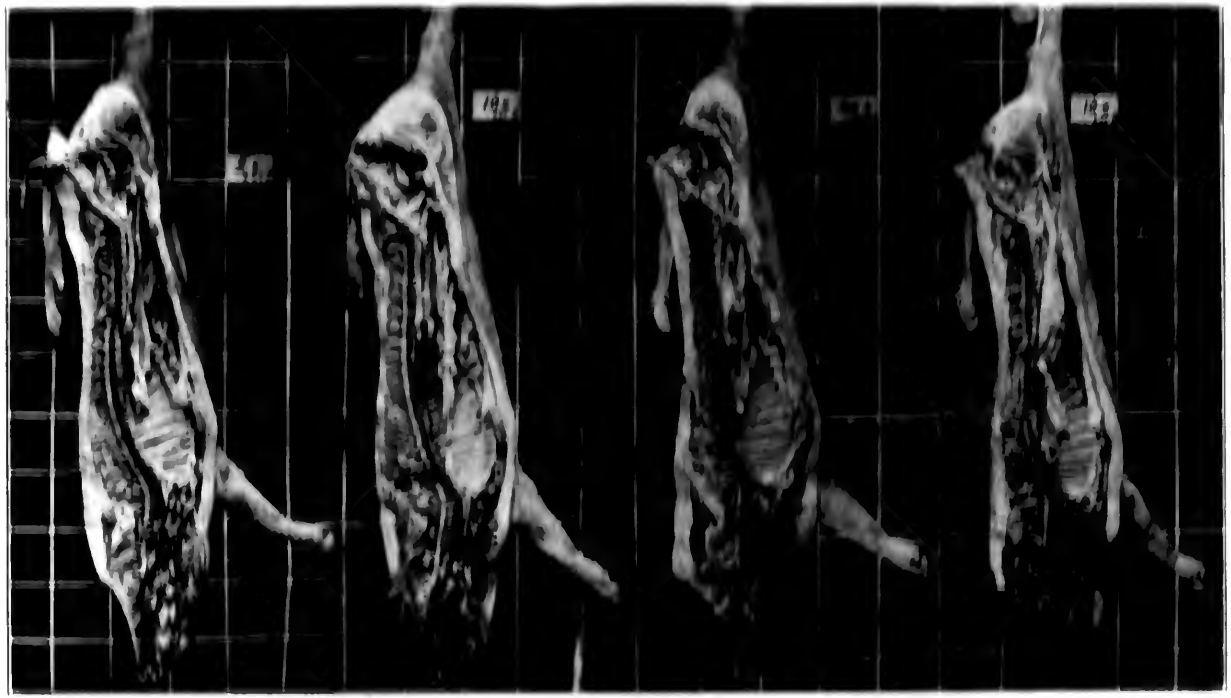
As in the preceding experiments, the dressing percentages were calculated on the warm carcass weights shrunk 2.6 percent. The individual and average dressing percentages of the hogs are given in Tables 36 and 37.

No differences were apparent between lots in dressing percentage, due either to type or to method of feeding.

CARCASS MEASUREMENTS

In general, the carcass measurements indicate there was not as much difference in conformation between types in this experiment as in the preceding experiments. The "average" carcasses of each type are shown in Fig. 21.

Hogs Hand-Fed in Dry Lot. The average length of the carcass of Rangy hogs hand-fed in dry lot was 1.9 inches greater than that of the Intermediate carcasses, altho there is much overlapping of the individual data (Table 38). From snout to first thoracic vertebra (length of head and neck) there was practically no difference between types. In length of body (first thoracic vertebra to H-bone) there was practically no difference. In length of hind leg (H-bone to rear toe) the average of the Rangy type was one inch greater than the average of the Intermediate type, with many cases of overlapping. There was no difference in depth of chest. The average depth of fat over the loin was .1 inch greater (10 percent) in the Intermediate than in the Rangy types; however, the individual variation in this respect was great. There was no difference in circumference of foreleg. The average foreleg of the Rangy type was .5 inch longer, but there were many cases of overlapping.



Hand Fed in Dry Lot — Self Fed in Pasture

FIG. 21. TYPICAL CARCASSES OF INTERMEDIATE AND RANGY HOGS SLAUGHTERED AT 225 POUNDS

The carcass at the left of each pair is the average of the Intermediate type, and at the right the average of the Rangy. Small differences are to be noted between these two types as compared with differences shown in the earlier experiments (Fig. 8).

Hogs Self-Fed on Pasture. Of the self-fed, pasture lots, the Rangy type averaged 1.3 inches greater length of carcass than the Intermediate type (Table 39). In length of head and neck and in length of body there was no apparent difference between types. In length of hind leg the Rangy type was one inch longer, with considerable overlapping of individuals. In depth of chest there was no difference. In depth of fat over the loin the Intermediate type was .1 inch, or 9 percent, greater. There was no difference in circumference of foreleg, but the foreleg of the Rangy type averaged .8 inch longer.

CUTTING TEST

Both halves of each carcass were cut into the same wholesale cuts as in the preceding experiment, and the cutting percentages calculated on the basis of the weight of the entire carcass at the time of cutting. An inspection of the data (Tables 40 and 41) fails to show any differences in cutting percentages between the Intermediate and Rangy types.

Hogs Self-Fed on Alfalfa. Individual and average cutting percentages of the self-fed, pasture lots, (Tables 42 and 43) again reveal no significant differences between the Intermediate and Rangy types.

PHYSICAL COMPOSITION OF CUTS

Each cut of the right half was divided into lean, fat, skin and bone, as in the second experiment, page 437. No striking differences in the composition of the cuts of the Intermediate and Rangy hand-fed hogs is shown (Tables 44 to 46), and neither do any distinctive differences appear in physical composition of cuts from these two types in the self-fed lot (Table 47).

PHYSICAL COMPOSITION OF CARCASSES

In the hand-fed lots no significant difference was apparent between the Intermediate and Rangy carcasses in content of lean. Table 48. However, the hand-fed Rangy carcasses contained 1.4 percent less fat, 1.3 percent more skin, and 4 percent more bone than the Intermediate carcasses.

Comparing the self-fed lots, again there are no significant differences in content of lean. The Rangy self-fed carcasses contained 4.3 percent less fat, 3 percent more skin, and 3 percent more bone than the Intermediate carcasses. These small differences, however are of doubtful significance since the individual variations were so great.

TABLE 36.—LIVE WEIGHTS, WARM AND COLD CARCASS WEIGHTS, AND DRESSING PERCENTAGES OF HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: THIRD EXPERIMENT

Hog No.	Live weight	Warm carcass weight			Total cold weight[1]	Dressing percentage[2]
		Right half	Left half	Total		
Intermediate						
	lbs.	*lbs.*	*lbs.*	*lbs.*	*lbs.*	*pct.*
10b	228.0	90.0	91.6	181.6	177.2	77.7
2b	223.7	84.7	89.1	173.8	169.6	75.8
16b	221.4	87.9	88.3	176.2	172.0	77.7
7b	223.6	87.7	88.9	176.6	172.4	77.1
15b	220.9	86.9	90.6	177.5	173.2	78.4
14b	218.4	86.3	87.7	174.1	169.9	77.8
9s	225.1	89.7	91.1	180.8	176.5	78.4
1b	216.2	81.0	85.2	166.2	162.3	75.0
3b	226.2	90.7	93.2	184.0	179.6	79.4
17b	224.4	90.0	89.2	179.2	174.9	77.9
20s	226.8	91.4	91.3	182.7	178.4	78.6
4s	231.7	93.7	89.1	182.8	178.4	77.0
11s	220.7	86.7	86.5	173.2	169.1	76.6
5s	219.8	89.4	86.8	176.2	171.9	78.2
11b	219.3	88.5	90.8	179.3	175.0	79.8
12s	222.1	87.0	88.7	175.7	171.5	77.2
19b	221.4	86.8	89.7	176.5	172.3	77.8
13b	222.5	90.4	89.1	179.5	174.8	78.6
Average	.....	.....	.....	.....	.....	77.7
Rangy						
2s	222.8	86.7	88.8	175.5	171.3	76.9
19b	224.7	87.9	88.0	175.9	171.6	76.4
5b	220.2	86.5	86.5	173.0	168.8	76.7
16s	216.8	83.4	84.5	167.9	163.9	75.6
7b	230.9	88.3	91.4	179.7	175.4	76.0
4b	231.0	92.1	95.4	187.5	183.0	79.2
3s	228.0	89.3	88.8	178.1	173.8	76.2
18b	231.6	90.0	90.6	180.6	176.2	76.1
13s	229.1	88.2	91.4	179.7	175.4	76.6
12s	223.6	88.4	89.2	177.6	173.4	77.5
6b	226.7	90.5	94.3	184.8	180.4	79.6
9s	225.1	91.5	92.3	183.8	179.4	79.7
14b	218.6	89.9	89.4	179.4	175.1	80.1
17s	222.4	89.4	88.7	178.2	173.9	78.2
10s	226.1	89.9	87.1	177.1	172.8	76.4
15s	220.9	88.1	87.7	175.9	171.6	77.7
20s	220.2	85.2	87.7	172.9	168.7	76.6
Average	.....	.....	.....	.....	.....	77.4

[1]Equals 2.6 percent shrinkage of total warm carcass weight. [2]Expressed as percentage of live weight

TABLE 37.—LIVE WEIGHTS, WARM AND COLD CARCASS WEIGHTS, AND DRESSING PERCENTAGES OF HOGS SELF-FED ON ALFALFA PASTURE, 225-POUND WEIGHTS: THIRD EXPERIMENT

Hog No.	Live weight	Warm carcass weight			Total cold weight[1]	Dressing percentage[2]
		Right half	Left half	Total		
Intermediate						
	lbs.	*lbs.*	*lbs.*	*lbs.*	*lbs.*	*pct.*
99b	221.5	88.6	87.4	175.9	171.7	77.5
39b	233.4	94.1	91.1	185.3	180.8	77.5
0s	218.2	88.9	87.8	176.7	172.4	79.0
6b	225.4	92.4	89.2	181.6	177.3	78.6
70b	221.6	87.7	89.5	177.2	172.9	78.1
3b	226.4	91.4	90.0	181.4	177.0	78.2
80b	221.0	90.1	85.4	175.6	171.4	77.5
9s	221.1	89.1	91.2	180.4	176.0	79.6
99s	220.9	90.7	91.2	182.0	177.6	80.4
20b	233.1	90.2	90.0	180.2	175.9	75.5
29b	221.9	88.7	88.6	177.2	173.0	77.9
0b	223.2	89.7	90.9	180.7	176.3	79.0
96b	222.0	93.4	88.1	181.5	171.1	77.1
96s	220.0	87.6	86.1	173.7	169.5	77.1
90b	225.0	89.4	89.1	178.5	174.2	77.4
93b	221.7	91.7	93.4	185.1	180.6	81.5
66s	227.6	90.4	92.5	182.9	178.5	78.4
63b	224.1	92.1	91.9	184.1	179.6	80.2
Average	.....	.....	.....	.....	.....	78.4
Rangy						
3b	221.7	88.8	88.9	177.7	173.4	78.2
10s	220.5	89.2	84.5	173.7	169.5	76.9
33b	224.6	88.6	86.9	175.4	171.2	76.2
36s	230.0	88.4	86.9	175.3	171.0	74.4
20b	222.0	87.8	89.2	177.0	172.7	77.8
2b	221.1	86.2	87.7	174.0	169.8	76.8
93b	226.4	90.9	89.1	180.0	175.7	77.6
30b	228.2	89.3	88.4	177.7	173.4	76.0
93s	231.1	90.9	89.2	180.2	175.9	76.1
40s	222.9	87.2	89.8	177.1	172.8	77.5
3s	218.0	85.7	86.9	172.6	168.5	77.3
6s	222.2	91.6	92.9	184.5	180.1	81.0
0s	221.7	89.4	89.6	179.1	174.8	78.8
30s	223.6	90.0	88.9	178.9	174.6	78.1
99s	226.3	91.7	92.4	184.1	179.7	79.4
90s	220.4	89.2	88.6	177.8	173.5	78.7
9b	211.2	81.7	84.6	166.4	162.4	76.9
Average	.....	.....	.....	.....	.....	77.5

[1]Equals 2.6 percent shrinkage of total warm carcass weight. [2]Expressed as percentage of live weight.

TABLE 38.—CARCASS MEASUREMENTS OF INTERMEDIATE AND RANGY HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS[1]: THIRD EXPERIMENT

Hog No.	Snout to rear toe	Snout to first thoracic vert.	H-bone to first thoracic vert.	H-bone to rear toe	Depth of chest outside	Depth of fat over loin	Circumference of fore shank	Length of foreleg
Intermediate								
10b	68.5	17.2	28.5	23.2	12.9	1.6	6.2	15.0
13b	69.2	17.2	28.6	23.6	13.1	1.2	5.9	15.0
2b	71.7	18.2	30.2	24.0	13.0	1.2	6.1	15.0
16b	68.0	17.2	28.6	23.0	13.1	1.6	5.9	15.1
7b	69.5	17.6	28.6	23.7	11.5	1.4	6.0	15.2
15b	69.5	18.5	28.6	23.0	13.1	1.9	5.6	14.7
14b	69.7	17.7	28.6	23.9	12.7	1.4	6.0	15.0
9s	70.7	17.9	29.0	24.4	13.4	1.5	6.5	15.4
3b	71.4	18.0	30.2	23.7	13.9	1.5	5.9	14.2
1b	71.5	18.7	30.0	23.6	12.5	1.4	6.4	14.4
20s	71.2	16.4	31.0	23.5	13.7	1.6	6.5	14.2
17b	71.2	18.6	30.0	23.4	14.2	1.5	6.0	13.5
11b	71.9	17.6	30.1	24.5	13.7	1.9	6.2	14.5
12s	70.6	17.9	29.7	23.6	13.4	1.7	6.2	14.2
19b	71.0	17.7	30.7	23.1	14.1	1.6	6.0	14.1
11s	68.4	16.5	29.2	22.6	15.4	1.4	6.0	13.4
5s	70.2	18.6	29.4	23.2	14.2	1.9	6.0	13.2
Average	70.3	17.8	29.5	23.5	13.4	1.5	6.1	14.5
Rangy								
2s	70.7	18.1	30.5	23.7	12.7	1.2	5.9	15.7
5b	71.5	18.6	29.5	24.9	12.7	1.2	6.0	16.0
16s	69.5	17.7	28.5	24.2	13.0	1.1	6.0	15.9
19b	73.0	18.5	30.5	25.7	13.0	1.1	6.1	16.6
7b	75.0	19.2	31.5	25.0	12.4	1.4	6.2	16.4
4b	71.6	17.2	31.0	23.7	14.0	2.2	6.5	14.2
3s	71.2	17.6	30.6	24.1	14.2	1.2	6.2	15.1
12s	71.4	18.0	29.7	24.6	14.9	1.5	6.1	14.1
18b	73.9	18.6	31.7	24.5	13.4	1.9	6.4	14.7
13s	71.9	18.0	31.0	23.5	13.9	1.5	6.0	14.2
9s	73.0	17.7	31.2	24.2	13.6	1.4	6.1	14.1
17s	72.9	17.2	31.5	24.4	14.5	1.6	6.1	14.2
14b	73.6	18.2	31.0	24.5	13.6	1.5	6.2	15.0
10s	72.0	17.7	29.0	25.0	13.6	1.5	6.5	14.7
15s	71.4	17.4	30.5	24.6	14.1	1.2	6.0	15.0
20s	73.2	17.6	31.1	24.6	12.9	1.5	6.1	14.4
Average	72.2	18.0	30.6	24.5	13.5	1.4	6.2	15.0

[1]One carcass was not measured.

TABLE 39.—CARCASS MEASUREMENTS OF INTERMEDIATE AND RANGY HOGS SELF-FED ON ALFALFA PASTURE, 225-POUND WEIGHTS[1]: THIRD EXPERIMENT

Hog No.	Snout to rear toe	Snout to first thoracic vert.	H-bone to first thoracic vert.	H-bone to rear toe	Depth of chest outside	Depth of fat over loin	Circumference of fore shank	Length of foreleg
				Intermediate				
0s	67.1	17.4	27.5	23.0	13.5	1.2	5.9	14.7
6b	66.5	15.7	29.1	22.2	13.7	1.7	5.9	13.5
70b	70.6	18.0	29.6	23.7	13.6	1.5	6.2	14.6
3b	67.2	17.0	27.9	22.7	13.5	1.6	6.0	14.2
80b	69.5	18.0	29.1	22.9	13.5	1.7	6.1	14.5
9s	70.0	16.7	31.0	23.0	13.7	1.5	5.7	14.5
99s	68.5	17.1	29.4	22.6	12.7	2.0	6.0	14.4
20b	70.0	17.7	29.0	23.5	13.5	1.6	5.9	15.0
29b	70.0	18.0	29.0	23.4	13.2	1.6	6.0	14.6
0b	69.5	17.5	29.2	23.2	13.1	1.6	6.0	14.7
96b	67.5	17.2	28.9	22.2	14.1	1.6	5.6	13.4
96s	68.0	17.2	28.6	23.1	13.4	1.6	6.0	15.0
90b	69.2	17.6	29.2	23.5	13.4	1.4	5.9	14.7
63b	69.4	17.6	29.2	23.7	13.4	1.6	5.9	14.0
93b	69.9	18.0	29.5	22.5	13.4	2.0	6.0	14.4
66s	69.5	18.6	28.7	22.7	13.1	1.5	6.1	14.2
Average	68.9	17.5	29.1	23.0	13.4	1.6	5.9	14.4
				Rangy				
3b	70.0	17.5	29.5	24.4	13.6	1.5	6.0	15.5
33b	70.0	18.5	29.4	23.5	13.4	1.5	6.9	15.2
10s	70.2	17.4	29.4	24.2	12.9	1.4	6.0	15.0
36s	72.6	17.9	31.0	24.4	13.1	1.2	5.6	15.7
20b	69.0	16.9	28.9	24.4	13.4	1.2	6.0	15.5
2b	71.5	18.4	29.6	23.5	13.1	1.7	5.9	15.1
93b	70.7	17.7	28.9	25.0	13.5	1.0	5.9	16.0
30b	72.5	18.2	30.1	24.7	13.0	1.4	6.6	15.6
40s	70.0	17.0	29.5	24.1	13.1	1.7	5.6	15.0
3s	69.5	17.2	28.5	24.2	13.6	1.9	5.4	15.0
93s	72.0	19.2	29.5	23.9	13.1	1.6	5.5	15.1
6s	70.0	17.0	29.9	23.9	13.1	1.7	5.6	14.0
0s	70.0	17.7	29.2	23.5	12.9	1.4	6.2	14.5
30s	69.5	16.6	29.9	24.1	12.9	1.6	6.1	15.1
90s	70.0	18.0	29.0	24.2	13.5	1.5	5.9	15.2
99s	68.0	17.0	28.7	23.2	13.5	1.5	5.7	15.0
9b	68.4	17.2	28.7	23.2	12.6	1.1	5.7	15.1
Average	70.2	17.6	29.4	24.0	13.2	1.5	5.9	15.2

[1]Two carcasses were not measured.

TABLE 40.—CUTTING PERCENTAGES OF INTERMEDIATE HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: THIRD EXPERIMENT

(Expressed in percentage of carcass weight)

Hog No.	15b	14b	9s	1b	17b	20s	11b	12s	19b	5s	11s	3b	4s	10b	13b	2b	7b	16b	Aver.
Carcass weight	175	169	179	162.7	173.5	176	174.7	170	169.5	171	169	175.5	175.7	176.7	173.5	168.5	172.5	172.5	
Head	10.2	10.3	9.8	10.3	9.3	9.3	9.5	10.4	10.5	10.2	9.8	10.4	9.3	10.0	10.3	10.0	9.6	9.7	9.9
Feet	2.6	3.0	3.1	3.4	3.0	3.3	3.2	3.0	2.9	2.7	2.7	2.6	3.3	3.0	3.0	3.2	3.1	2.9	3.0
Tail	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Leaf fat	2.4	2.7	1.9	1.8	1.6	1.7	1.9	1.8	2.2	1.0	2.3	2.8	1.8	2.5	2.4	2.2	2.5	2.2	2.1
Kidney	.3	.4	.3	.4	.3	.3	.4	.4	.3	.3	.3	.3	.4	.3	.4	.4	.4	.3	.3
Neck bones	1.3	1.4	1.3	1.3	1.3	1.2	1.5	1.4	1.3	1.3	1.5	1.5	1.5	1.4	1.3	1.4	1.3	1.3	1.4
Boston	6.8	6.6	6.9	6.9	7.2	6.5	6.4	6.3	5.9	5.9	6.7	6.9	6.0	6.4	6.9	7.0	6.3	7.0	6.6
Clear plate	2.8	2.9	2.7	2.8	2.9	2.7	2.9	2.8	2.6	3.3	2.5	3.0	2.6	2.7	2.9	2.5	2.8	3.0	2.8
Picnic	8.8	8.4	9.1	8.6	8.7	8.8	9.2	8.1	8.4	8.7	9.0	8.6	9.3	8.1	8.4	8.0	8.0	8.6	8.6
Ham	18.0	19.3	19.0	17.2	19.4	19.1	17.8	17.6	18.1	19.3	18.4	16.7	19.5	18.8	18.2	19.5	18.0	16.9	18.4
Loin	15.3	14.8	15.9	15.1	16.0	15.0	15.8	15.4	15.2	14.6	16.0	15.6	15.6	15.6	16.1	16.1	15.1	15.0	15.5
Fat back	9.7	7.9	7.9	9.1	8.3	8.3	10.1	9.9	9.4	10.0	7.2	9.1	8.3	9.4	8.5	7.4	9.6	10.3	8.9
Spareribs	2.4	2.4	2.4	2.7	2.4	2.4	2.4	2.5	2.3	2.2	2.7	2.5	2.6	2.1	2.1	2.3	2.4	2.3	2.4
Belly	10.1	11.0	10.2	12.2	11.3	11.1	9.2	10.0	10.6	10.4	10.6	10.9	9.6	10.2	10.9	10.7	11.1	10.4	10.6
Total trim	9.0	8.8	8.7	8.5	8.3	9.1	9.1	9.8	9.8	9.4	9.9	8.9	9.5	9.3	9.4	9.0	9.3	9.5	9.2
Total	99.8	100.0	99.3	100.4	100.1	98.9	99.5	99.5	99.6	99.4	99.7	99.9	99.4	99.9	100.9	99.8	99.6	99.5	99.8

TABLE 41.—CUTTING PERCENTAGES OF RANGY HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: THIRD EXPERIMENT

(Expressed in percentage of carcass weight)

Hog No.	2s	16s	5b	19b	4b	7b	13s	3s	12s	18b	6b	17s	14b	9s	15s	10s	20s	Aver.
Carcass weight	171.25	165.75	169.5	167.75	182.5	177	174.75	171	171	170.25	178.5	172.5	170.25	178	172.25	175	169.5	
Head	9.1	9.4	9.7	9.8	9.5	9.2	8.7	9.2	8.7	9.3	10.2	9.5	8.9	9.3	9.3	9.7	9.4	9.3
Feet	3.0	3.2	3.2	3.5	3.0	3.3	2.9	3.1	3.1	3.1	2.9	3.0	3.1	2.9	3.3	3.5	3.3	3.1
Tail	.1	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Leaf fat	2.1	2.2	2.1	2.4	1.9	2.0	2.4	1.9	2.3	2.5	2.1	2.4	2.6	2.2	2.2	1.6	2.2	2.2
Kidney	.4	.4	.3	.5	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.5	.4	.4	.3
Neck bones	1.5	1.5	1.4	1.6	1.3	1.4	1.5	1.4	1.3	1.5	1.6	1.6	1.6	1.5	1.5	1.6	1.4	1.5
Boston	7.2	7.1	7.1	7.6	6.8	7.0	6.5	7.7	6.8	6.2	5.6	6.0	5.8	6.0	6.9	7.3	7.4	6.8
Clear plate	2.5	2.4	2.5	2.1	2.9	2.6	2.6	2.7	2.4	2.5	2.8	2.3	2.5	2.5	2.2	2.4	2.4	2.5
Picnic	9.6	9.0	9.1	8.7	8.0	8.5	8.5	8.7	8.7	9.3	8.6	9.3	9.5	9.5	8.8	8.9	9.1	8.9
Ham	19.2	18.5	19.6	19.0	17.9	19.1	19.4	18.9	19.6	18.0	17.3	19.1	18.9	19.7	19.2	20.9	19.5	19.0
Loin	15.5	15.9	15.9	15.2	15.6	16.0	16.8	15.2	15.8	15.7	15.5	16.2	15.4	15.5	16.0	16.6	16.5	15.8
Fat back	8.1	8.3	8.9	7.5	10.6	8.5	8.3	8.0	8.9	9.1	10.9	8.5	9.4	8.9	7.3	6.4	7.1	8.5
Spareribs	2.3	2.5	2.0	2.6	2.4	2.6	2.3	2.7	2.5	2.4	2.5	2.5	2.5	2.4	2.6	2.6	2.3	2.5
Belly	10.2	9.8	9.2	10.9	11.3	11.1	11.1	11.2	10.1	10.4	9.3	9.5	9.8	10.0	10.5	9.7	10.3	10.3
Total trim	8.9	9.5	8.2	8.4	8.4	8.4	8.7	8.6	8.8	9.2	9.9	9.2	8.7	9.0	9.3	8.1	8.2	8.8
Total	99.7	99.8	99.3	100.0	100.0	100.1	100.1	99.7	99.4	99.6	99.6	99.5	99.1	99.9	99.7	99.8	99.6	99.6

TABLE 12. CUTTING PERCENTAGES OF INTERMEDIATE HOGS SELF-FED ON ALFALFA PASTURE, 225-POUND WEIGHTS: THIRD EXPERIMENT

(Expressed in percentage of carcass weight)

Hog No.	90b	39b	9a	6b	70b	3b	80b	9a	99a	20b	29b	0b	96b	96a	90b	93b	63b	69a	Aver.
Carcass weight	169.25	178	170.25	175	173	177.75	171.75	175.75	175.5	173	172.5	174.75	174.75	169	173.25	180	178.25	176.75	
Head	9.8	10.1	9.0	10.9	9.8	9.8	9.8	8.9	9.0	9.5	9.0	10.3	8.8	9.0	9.1	9.9	10.0	10.4	9.7
Feet	3.0	2.8	2.8	2.6	3.1	2.7	2.9	2.8	2.8	3.0	2.8	2.7	2.5	2.7	2.8	2.8	2.6	2.9	2.8
Tail	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Leaf fat	2.3	2.0	2.6	2.3	1.7	2.5	3.1	1.7	2.3	2.0	2.5	2.0	2.4	1.8	2.7	3.0	1.9	1.8	2.3
Kidney	.3	.3	.1	.4	.3	.3	.4	.4	.4	.4	.4	.3	.3	.4	.4	.4	.3	.5	.4
Neck bones	1.2	1.1	1.3	1.0	1.4	1.3	1.3	1.3	1.2	1.2	1.4	1.4	1.5	1.4	1.4	1.0	1.2	1.2	1.3
Boston	6.6	6.1	6.9	6.6	7.2	6.2	6.3	6.5	5.9	6.2	6.0	6.4	6.2	6.7	6.4	6.2	6.7	6.1	6.3
Clear plate	3.3	4.0	3.1	3.3	3.4	3.0	3.2	3.4	2.7	3.4	3.2	3.5	3.3	3.2	3.0	3.2	3.1	2.8	3.2
Picnic	8.5	8.8	8.5	7.9	8.0	7.8	7.6	7.7	7.4	8.5	7.8	8.1	9.1	7.4	8.4	7.8	7.9	8.2	8.1
Ham	18.6	18.4	19.2	17.5	18.4	17.1	17.8	18.4	17.2	17.9	16.3	16.6	17.4	18.9	18.0	17.1	17.9	19.4	17.9
Loin	14.3	12.8	15.2	14.2	14.3	13.7	14.4	15.2	14.4	14.3	15.1	13.8	15.1	15.1	15.7	13.4	14.1	14.9	14.4
Fat back	8.3	10.5	7.4	10.4	9.4	10.5	10.9	9.7	12.1	11.3	11.3	12.0	11.4	10.4	9.7	11.4	9.8	10.2	10.4
Spareribs	2.7	2.1	2.7	2.2	2.4	2.7	2.3	2.3	2.4	2.4	2.6	2.6	2.3	2.2	2.4	2.2	2.3	2.2	2.4
Belly	12.6	11.5	12.6	12.5	11.5	12.2	10.6	12.0	11.3	11.0	10.5	10.4	10.0	10.4	11.1	11.6	11.8	10.2	11.4
Total trim	9.2	9.0	8.5	8.5	8.1	10.0	8.8	9.1	10.5	8.7	9.9	9.5	9.9	9.8	8.8	9.7	10.1	9.1	9.3
Total	100.3	100.1	100.3	99.8	99.8	99.9	99.5	99.5	99.7	99.9	99.8	99.7	100.3	99.5	100.0	99.8	99.8	100.0	100.0

TABLE 13. CUTTING PERCENTAGES OF RANGY HOGS SELF-FED ON ALFALFA PASTURE, 225-POUND WEIGHTS: THIRD EXPERIMENT
(Expressed in percentage of carcass weight)

Hog No.	8b	10a	33b	36a	20b	2b	23b	10b	23a	40a	2a	6a	9a	30a	99a	99a	9b	Aver.
Carcass weight	173.75	180.25	171.25	170.25	172.50	167.75	175	172.75	176.25	170.50	164.75	170.50	173.25	173	178.75	172.25	164.25	
Head	9.1	8.9	9.8	8.7	9.4	9.8	9.0	10.1	9.1	8.9	8.1	9.8	7.9	9.3	8.8	8.8	9.5	9.1
Feet	3.1	3.1	3.0	2.9	3.0	2.9	3.2	3.3	2.7	2.8	2.9	2.7	2.8	2.8	2.6	2.9	2.8	2.9
Tail	.1	.1	.1	.1	.1	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Leaf fat	1.9	2.2	1.7	2.3	2.7	2.0	2.7	1.8	2.3	2.1	2.4	2.6	2.0	2.2	2.4	2.2	2.5	2.2
Kidney	.4	.4	.4	.4	.5	.4	.5	.5	.4	.4	.4	.3	.3	.4	.3	.3	.4	.4
Back loins	1.4	1.5	1.6	1.5	1.3	1.5	1.4	1.6	1.3	1.4	1.6	1.4	1.4	1.4	1.4	1.3	1.6	1.4
Ham	7.3	6.4	6.5	6.6	6.2	6.1	6.5	6.4	5.8	6.4	6.4	6.2	6.9	6.4	6.6	6.3	6.6	6.4
Clear plate	3.2	3.0	3.0	2.8	2.6	3.0	2.8	3.5	3.1	3.0	3.0	3.0	2.7	3.0	3.5	2.9	3.4	3.1
Picnic	9.0	7.9	9.1	8.7	8.1	7.5	8.9	8.0	7.8	8.1	8.3	7.8	8.7	8.3	7.9	8.1	8.5	8.3
Ham	17.0	18.4	17.2	18.4	19.0	17.2	17.8	16.9	18.0	18.7	18.3	16.5	18.9	18.7	16.3	18.6	16.2	17.8
Loin	14.7	15.0	14.1	15.2	14.3	15.8	15.0	14.1	14.0	15.1	16.1	15.3	17.5	15.2	15.3	15.4	14.4	14.9
Fat back	8.7	8.0	9.1	9.0	9.1	12.0	9.7	10.6	10.9	9.9	10.3	12.8	9.7	10.8	12.7	10.3	10.0	10.3
Spareribs	2.5	2.5	2.6	2.7	2.4	2.1	2.5	2.3	2.1	2.4	2.5	2.3	2.6	2.1	2.3	2.6	2.2	2.4
Belly	11.9	11.3	10.8	10.8	11.5	10.4	10.4	10.4	11.0	10.5	9.9	10.5	9.9	10.3	11.0	10.6	10.4	10.6
Total loss	9.3	10.2	9.7	9.5	9.2	9.5	9.2	9.5	10.8	10.5	9.7	9.8	8.1	9.4	9.1	10.3	9.4	9.6
Total	99.8	100.0	99.5	99.6	99.4	99.5	99.5	99.8	100.0	99.9	100.0	100.0	99.3	100.4	99.7	100.2	99.2	99.6

TABLE 44.—PHYSICAL COMPOSITION OF CUTS FROM INTERMEDIATE HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: THIRD EXPERIMENT

(Expressed in percentage of trimmed cut)

Hog No.	10b	13b	2b	7b	16b	15b	14b	9s	1b	3b	17b	20s	11b	12s	19b	5s	11s	4s	Aver.
Head																			
Lean	22.5	15.8	20.2	17.6	20.9	23.4	26.6	27.5	24.0	21.5	28.1	29.2	31.5	30.7	23.8	21.5	32.7	25.4	24.6
Fat	43.5	48.3	51.8	49.0	43.8	52.8	39.6	35.9	36.5	32.2	31.8	33.1	22.0	21.9	39.9	39.0	27.9	18.9	37.1
Skin	15.0	9.5	12.1	11.8	11.0	7.2	10.0	15.5	14.8	16.4	12.2	11.9	16.6	16.5	11.3	12.8	16.3	16.6	13.2
Bone	18.2	23.0	17.0	20.8	23.9	16.1	23.9	19.0	24.6	29.0	28.5	26.8	30.3	21.9	25.6	26.7	24.5	39.1	24.4
Feet																			
Skin	23.3	23.1	21.8	23.6	21.5	16.1	22.0	21.6	22.0	14.1	16.1	19.8	19.4	17.3	18.3	15.0	12.2	17.1	19.1
Bone	77.0	76.9	78.2	76.1	78.1	84.3	78.4	78.4	77.3	85.4	84.7	80.2	81.3	82.7	82.2	85.0	87.8	84.8	81.0
Neck bones																			
Lean	55.9	40.7	37.2	38.0	36.2	56.1	40.2	41.7	35.5	32.0	36.0	23.1	44.0	32.0	36.8	35.0	32.0	28.6	37.8
Bone	44.1	59.3	63.8	58.7	61.5	45.1	59.8	58.3	61.2	70.4	64.0	76.9	58.4	62.2	63.2	65.0	72.0	71.4	62.2
Boston																			
Lean	85.7	86.5	79.5	84.5	83.9	86.1	89.1	86.0	90.8	83.0	84.7	86.7	79.4	85.0	85.2	83.4	77.2	86.3	84.6
Fat	9.3	9.6	15.2	11.5	11.7	10.9	7.8	10.1	4.3	12.5	11.5	10.2	15.6	10.0	10.6	11.3	17.5	8.9	11.0
Bone	4.5	4.2	5.5	3.8	4.2	4.0	5.2	4.4	4.7	4.5	4.3	5.1	5.5	4.8	4.2	4.2	5.3	4.8	4.6
Clear plate																			
Fat	91.0	90.6	88.4	92.2	93.4	93.8	93.5	91.0	88.9	91.1	90.7	91.1	92.6	91.3	87.9	90.5	88.1	86.1	90.7
Skin	9.0	9.4	11.6	8.3	6.2	6.6	7.0	9.0	10.0	8.9	9.7	8.9	9.3	8.8	10.6	8.2	11.9	14.7	9.3
Picnic																			
Lean	63.9	59.5	61.9	58.2	59.5	58.9	60.0	67.0	56.5	62.0	65.6	65.6	65.2	67.1	62.9	64.8	65.4	64.7	62.7
Fat	18.6	23.4	19.0	23.5	21.2	22.3	21.8	15.6	23.8	18.5	16.6	17.4	15.8	13.5	16.3	14.7	13.0	17.1	18.4
Skin	3.5	2.8	3.3	3.5	3.2	2.6	2.7	4.7	4.2	5.1	3.3	3.6	3.5	3.6	4.4	4.1	5.2	3.3	3.7
Bone	13.6	14.0	16.4	14.7	15.2	12.9	15.5	13.3	15.3	14.5	14.6	12.9	15.2	15.1	15.6	15.6	15.0	14.8	14.7
Ham																			
Lean	63.4	69.1	67.2	59.2	65.2	66.7	66.3	64.2	61.4	58.4	65.9	63.1	65.0	60.0	60.5	58.9	68.4	65.1	63.8
Fat	24.9	19.4	20.8	27.8	21.6	22.8	21.3	23.9	23.9	23.9	21.8	22.5	20.6	26.0	25.4	26.8	17.7	20.7	22.9
Skin	2.6	2.2	2.4	2.5	2.3	2.1	2.6	2.7	3.2	5.7	2.6	3.0	2.9	3.0	3.2	3.1	3.0	3.2	2.9
Bone	8.8	9.3	9.6	9.4	10.2	8.2	9.6	9.3	10.7	11.8	9.8	9.6	11.3	10.6	10.3	9.5	10.6	11.0	10.0
Loin																			
Lean	69.6	69.4	67.7	64.3	61.4	65.6	64.8	70.5	69.4	61.2	65.1	68.6	70.9	63.0	65.7	64.5	66.7	69.3	66.5
Fat	13.3	13.9	14.8	19.6	20.0	19.4	16.4	13.3	14.0	21.0	16.7	12.1	11.8	17.2	16.4	15.7	12.8	11.8	15.6
Bone	16.1	16.0	16.9	16.1	18.1	14.0	18.0	16.0	18.3	17.7	17.3	17.9	16.7	19.7	17.2	19.3	20.5	18.9	17.5

TABLE 44.—*Concluded*

Hog No.	10b	13b	2b	7b	16b	15b	14b	9s	1b	3b	17b	20s	11b	12s	19b	5s	11s	4s	Aver.
Fat back																			
Fat	88.6	90.2	87.5	93.0	92.3	92.4	88.3	87.8	87.2	88.7	89.0	89.0	90.5	90.5	89.2	88.5	87.2	85.5	89.2
Skin	11.4	9.8	12.5	6.8	7.7	7.2	11.7	12.4	12.9	11.5	10.9	11.7	9.5	9.9	11.1	11.5	12.0	14.4	10.8
Spareribs																			
Lean	61.4	68.9	65.6	67.6	66.5	67.7	67.0	65.1	66.1	56.6	59.5	53.5	63.0	62.9	62.1	63.2	61.4	41.9	62.2
Bone	38.6	31.1	34.4	32.9	36.6	30.8	34.0	35.7	33.0	45.2	40.5	46.5	37.4	37.1	37.4	36.8	36.4	58.1	37.9
Belly																			
Lean	49.1	48.9	50.4	47.9	48.7	52.3	50.8	54.5	47.9	43.5	48.3	50.5	47.4	44.8	46.4	40.3	64.1	55.1	49.6
Fat	43.8	45.9	44.6	47.5	46.0	44.6	44.5	39.4	46.1	49.5	46.9	42.1	47.7	49.5	48.0	51.5	28.4	38.3	44.7
Skin	7.1	5.5	5.6	4.2	4.9	4.2	4.8	6.5	5.9	7.2	5.3	5.7	5.8	6.2	5.9	8.0	7.1	6.6	5.9
Trimmings																			
Lean	26.9	18.2	26.8	18.1	20.1	24.4	22.8	23.0	20.1	19.9	23.5	21.0	26.5	20.6	19.7	14.8	25.7	28.7	22.2
Fat	61.5	65.6	62.9	70.1	68.9	65.4	67.8	64.3	69.3	70.9	65.0	68.2	61.5	69.8	68.7	77.2	59.1	58.7	66.4
Skin	11.4	7.6	9.0	10.9	8.9	8.8	8.2	10.5	8.6	8.6	10.1	11.3	10.6	8.4	10.5	7.8	11.6	11.9	9.7
Bone	1.0	0.8	1.5	1.3	1.7	1.4	1.3	2.2	2.2	....	1.3	1.4	1.9	1.4	1.9	1.3	1.3	0.6	1.3

TABLE 15.—PERCENTAGE COMPOSITION OF CLOTH FROM HANDY HOUR HAND-FED INDIVIDUALS IN DRY LOT, 285-POUND WEIGHTS: THIRD EXPERIMENT

(Expressed in percentages of trimmed cut)

Hog No.	3a	11a	8b	10b	4b	7b	14a	2a	13a	18b	17a	14b	6a	16a	9b	5b	Aver.
Hams	30.6	31.1	34.4	32.7	33.8	30.7	34.1	32.7	34.1	32.7	33.6	32.8	33.1	31.1	33.3	32.7	32.9
Loin	15.6	16.1	16.0	16.0	14.0	16.6	16.0	16.0	16.0	16.7	16.0	16.7	16.0	16.0	14.7	16.0	15.9
Belly	13.3	13.4	9.6	9.4	13.0	13.7	9.7	13.7	9.7	13.7	9.8	13.6	9.8	13.8	13.7	13.7	12.5
Butt	11.1	11.1	11.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
Jowl	9.1	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
Shoulder	20.1	19.0	19.7	19.7	18.8	18.6	19.8	17.2	19.8	16.5	20.2	16.5	20.7	18.7	18.4	17.2	18.9
Fat	1.3	0.8	0.0	0.3	1.0	0.0	0.0	1.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Bone	8.3	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Rind	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Neck	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Breast	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Fat	0.8	0.6	0.4	0.4	0.7	0.7	0.4	0.6	0.4	0.6	0.4	0.6	0.4	0.6	0.4	0.6	0.5
Bone	3.6	3.8	4.0	3.9	3.7	3.7	4.0	3.8	4.0	3.8	4.0	3.8	4.0	3.8	4.0	3.8	3.9
Rind	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Plate-flank	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Fat	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Bone	2.9	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Rind	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Clear plate	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Fat	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Bone	1.4	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Shoulder	11.1	11.2	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
Fat	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Bone	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Rind	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Neck	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Fat	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Bone	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Rind	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Shoulder	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Fat	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Bone	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Rind	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

TABLE 45.—*Concluded*

Hog No.	3a	16a	6b	10b	4b	7b	18a	8a	19a	18b	17a	14b	9a	16a	10a	9b	6b	Aver.
Fat back	84.0	88.4	87.7	88.8	80.3	86.1	88.4	91.0	87.0	87.0	86.8	86.6	88.6	87.0	89.4	85.6	89.1	87.4
Fat	16.4	11.4	13.6	11.9	19.6	13.8	10.7	9.0	13.1	13.4	13.2	13.4	11.4	13.0	10.6	14.4	10.9	13.4
Blue																		
Quarterside																		
Fat	67.3	88.3	88.0	88.0	80.4	87.0	88.7	91.7	91.3	88.2	87.5	86.0	88.4	88.4	89.8	86.7	89.7	87.9
Lean	4.3	3.6	3.0	2.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Belly																		
Fat	88.7	87.7	88.0	88.6	86.0	87.4	88.7	91.0	87.6	87.6	86.9	86.6	88.6	87.6	89.4	86.1	89.1	87.8
Lean	4.7	4.7	4.0	4.6	6.0	4.6	4.0	4.0	4.4	4.4	4.6	4.4	4.4	4.4	4.6	4.4	4.4	4.4
Loin																		
Fat	88.0	88.0	88.0	88.6	86.0	87.4	88.7	91.0	87.6	87.6	86.9	86.6	88.6	87.6	89.4	86.1	89.1	87.8
Lean	4.7	4.7	4.0	4.6	6.0	4.6	4.0	4.0	4.4	4.4	4.6	4.4	4.4	4.4	4.6	4.4	4.4	4.4
Shoulder																		
Fat	87.7	88.4	87.7	88.8	80.3	86.1	88.4	91.0	87.0	87.0	86.8	86.6	88.6	87.0	89.4	85.6	89.1	87.4
Lean	4.7	4.7	4.0	4.6	6.0	4.6	4.0	4.0	4.4	4.4	4.6	4.4	4.4	4.4	4.6	4.4	4.4	4.4
Ham																		
Fat	87.7	88.4	87.7	88.8	80.3	86.1	88.4	91.0	87.0	87.0	86.8	86.6	88.6	87.0	89.4	85.6	89.1	87.4
Lean	4.7	4.7	4.0	4.6	6.0	4.6	4.0	4.0	4.4	4.4	4.6	4.4	4.4	4.4	4.6	4.4	4.4	4.4

TABLE 46.—PHYSICAL COMPOSITION OF CUTS FROM INTERMEDIATE HOGS SELF-FED ON ALFALFA PASTURE, 225-POUND WEIGHTS: THIRD EXPERIMENT

(Expressed in percentage of weight of trimmed cut)

Hog No.	99b	39b	0s	6b	70b	3b	80b	9s	99s	20b	29b	0b	96b	96s	90b	93b	63b	66s	Aver.
Head																			
Lean	29.7	25.2	27.8	22.4	25.9	23.8	24.2	26.8	13.5	25.4	22.4	16.4	21.0	16.8	18.3	15.1	14.9	15.4	21.4
Fat	36.3	43.3	37.7	38.7	42.6	47.3	32.8	39.2	46.3	42.1	45.9	54.2	37.7	47.6	48.8	59.9	54.5	52.5	44.9
Skin	14.3	12.9	12.4	14.2	14.0	10.4	13.9	15.7	10.1	12.2	11.2	9.4	8.4	11.5	10.3	12.9	11.2	12.7	12.1
Bone	20.0	18.8	21.0	27.3	17.7	19.3	29.5	17.6	29.0	21.0	21.2	20.3	32.9	23.6	23.4	12.0	19.5	19.4	21.9
Feet																			
Skin	18.3	18.7	18.8	19.0	17.2	17.0	15.9	15.5	17.1	17.6	16.3	20.0	16.3	21.1	17.1	25.7	21.0	20.7	18.5
Bone	81.3	80.6	80.8	80.6	82.1	83.0	84.1	82.9	81.7	82.0	82.0	78.3	82.4	78.5	84.5	74.7	79.5	78.9	81.0
Neck bones																			
Lean	27.5	33.3	35.4	60.0	41.2	45.5	37.8	38.1	42.1	41.7	45.8	49.6	47.8	44.6	40.4	36.2	45.0	49.1	42.3
Bone	72.5	66.7	66.4	37.3	62.4	53.0	62.2	55.1	57.9	58.3	52.8	49.6	49.3	55.4	59.6	63.8	55.9	50.9	57.2
Boston																			
Lean	86.2	83.3	89.3	89.5	80.3	74.0	72.3	83.6	74.4	83.5	79.1	68.1	81.2	70.9	76.2	66.4	77.4	73.8	78.3
Fat	10.3	12.2	7.2	7.3	13.8	22.2	23.9	12.0	20.7	15.9	15.7	27.5	14.0	23.6	19.5	29.8	18.5	21.4	17.5
Bone	4.1	4.5	4.5	4.0	4.8	4.4	4.4	2.8	4.5	4.1	4.1	4.4	4.7	4.4	4.6	4.6	4.1	5.6	4.4
Clear plate																			
Fat	89.6	93.6	93.0	93.8	90.8	92.0	92.5	90.3	92.3	92.7	94.0	93.7	91.7	91.2	93.6	91.3	92.3	90.4	92.2
Skin	8.0	5.9	7.4	6.9	9.6	7.7	7.5	6.4	8.2	7.3	6.7	6.3	8.0	9.2	7.2	9.0	8.1	9.6	7.7
Picnic																			
Lean	62.5	62.0	60.9	64.6	66.6	66.5	56.4	61.1	54.8	53.4	61.9	54.4	61.2	55.2	57.8	51.3	54.8	52.6	59.3
Fat	20.1	21.1	14.4	19.9	17.1	17.2	26.3	22.4	25.4	29.1	22.3	27.5	26.2	24.8	24.1	32.0	27.4	28.5	23.7
Skin	2.9	3.1	3.3	3.5	3.2	3.2	3.1	3.1	4.5	3.9	2.9	3.4	3.2	3.4	3.4	3.4	3.7	3.6	3.4
Bone	14.9	13.8	12.9	12.4	13.1	12.6	14.0	13.4	15.0	13.9	13.2	14.2	11.8	16.6	14.4	13.4	13.7	15.1	13.8
Ham																			
Lean	67.7	62.6	68.2	60.6	66.0	61.1	61.0	66.5	60.1	62.0	64.5	60.3	64.3	58.6	61.3	53.2	60.8	59.5	62.1
Fat	20.8	25.7	20.4	28.2	20.1	26.9	26.2	22.5	27.1	25.9	23.9	26.5	24.1	29.9	26.6	35.7	26.5	28.3	25.9
Skin	2.2	2.3	2.5	2.4	3.1	2.8	2.6	2.5	2.2	2.8	2.2	2.7	2.3	2.4	2.5	2.9	3.0	3.1	2.6
Bone	9.5	9.4	9.1	7.9	9.7	9.2	9.6	8.7	10.1	9.3	10.1	9.6	8.8	8.9	9.1	8.4	10.0	9.1	9.3
Loin																			
Lean	65.7	66.1	68.2	59.8	67.1	58.4	60.4	71.4	64.3	63.6	63.2	61.5	61.0	59.2	61.5	59.2	65.0	65.2	63.4
Fat	16.5	17.2	17.1	20.3	14.1	24.7	20.9	13.1	17.0	18.7	20.0	19.6	21.6	20.9	20.7	23.7	17.0	17.8	18.9
Bone	17.3	16.7	14.3	19.1	18.1	16.4	17.6	15.8	16.7	18.2	14.8	18.1	16.8	19.1	17.7	16.1	17.4	16.5	17.0

TABLE 40.—*Concluded*

Hog No.	99b	89b	9a	6b	70b	3b	80b	9a	90a	20b	0b	90b	90a	90b	93b	63b	60a	Aver.
Fat back																		
Fat	92.2	92.2	90.6	90.6	87.5	92.2	89.4	91.0	94.6	92.1	93.6	92.1	92.5	90.2	90.9	91.1	89.4	91.4
Skin	8.0	7.8	10.2	7.6	12.9	8.0	7.4	8.2	6.9	8.2	6.2	7.9	7.7	10.0	9.3	9.4	10.5	8.5
Spareribs																		
Lean	63.0	59.0	61.7	63.3	61.9	67.4	68.0	62.5	68.3	94.0	67.4	67.4	62.6	63.5	68.6	69.0	64.0	65.2
Bone	37.8	39.0	37.5	35.7	36.6	32.6	31.4	31.5	30.3	36.0	32.1	32.6	37.4	36.5	31.9	32.5	38.0	34.4
Belly																		
Lean	43.8	40.6	61.5	42.2	47.0	43.9	35.0	45.7	44.5	46.0	34.2	46.6	34.4	49.9	42.8	44.4	40.4	43.0
Fat	51.4	54.6	43.3	51.7	49.3	49.6	59.6	49.2	50.8	48.5	61.3	48.3	59.6	45.0	51.9	50.4	44.5	51.8
Skin	4.8	4.0	4.0	5.0	6.0	6.3	5.5	5.0	4.3	5.7	4.2	5.1	5.5	4.9	5.4	5.7	6.0	5.2
Trimmings																		
Lean	22.9	22.3	21.5	15.9	18.6	12.7	14.9	20.4	19.2	19.3	21.0	10.7	17.8	20.0	16.6	12.0	22.9	20.5
Fat	67.5	68.1	65.4	72.0	67.8	78.0	74.4	66.7	72.1	66.6	70.4	80.8	71.6	70.0	71.0	76.5	63.1	69.2
Skin	8.7	8.7	8.6	8.3	10.5	8.1	8.7	10.2	7.9	9.7	6.9	7.7	7.7	8.6	8.4	9.7	8.9	8.7
Bone	1.0	1.2	1.5	.9	2.1	1.3	1.0	1.1	1.2	2.2	1.2	2.3	1.7	.9	1.2	1.3	1.2	1.4

TABLE 47.—PHYSICAL COMPOSITION OF CUTS FROM RANGY HOGS SELF-FED ON ALFALFA PASTURE, 225-POUND WEIGHTS: THIRD EXPERIMENT

(Expressed in percentage of weight of trimmed cut)

Hog No.	3b	10s	33b	36s	20b	2b	93b	30b	93s	40s	3s	6s	0s	30s	99s	90s	9b	Aver.
Head																		
Lean	20.2	24.9	22.6	26.2	23.3	21.5	22.8	24.7	19.7	26.2	27.7	19.5	23.5	16.8	17.3	16.7	15.3	21.7
Fat	42.5	32.8	28.0	36.2	47.1	47.5	40.7	39.8	41.3	38.1	39.9	50.9	41.9	54.0	48.4	41.8	47.5	42.3
Skin	13.1	12.6	19.5	13.4	13.1	12.9	10.9	14.0	12.2	15.2	10.5	8.4	11.9	10.1	11.3	14.1	13.9	12.8
Bone	23.8	29.8	31.0	24.8	16.5	18.2	25.2	21.2	22.2	21.3	21.2	21.3	22.9	18.9	23.8	27.7	22.6	23.1
Feet																		
Skin	19.0	21.0	19.4	17.0	16.5	18.4	16.2	19.3	18.2	20.9	17.2	18.9	22.1	19.1	17.6	22.4	23.9	19.2
Bone	80.7	77.9	79.7	83.0	83.5	81.6	82.7	80.7	81.0	80.3	81.1	81.9	77.9	79.1	82.8	78.0	77.8	80.6
Neck bones																		
Lean	40.5	40.7	39.3	40.0	33.8	54.4	37.9	50.8	50.8	39.6	43.3	48.6	37.3	43.7	49.6	33.0	47.3	43.0
Bone	61.1	58.0	57.4	58.7	66.2	45.6	61.4	54.5	47.5	59.4	53.3	50.5	61.9	54.1	51.1	64.2	53.8	56.5
Boston																		
Lean	82.0	91.1	81.0	86.1	75.6	80.0	76.1	80.0	81.4	85.6	88.4	79.8	87.3	82.9	71.8	76.9	88.4	82.0
Fat	13.1	4.9	15.2	13.0	18.9	16.0	19.0	14.7	13.3	10.0	6.2	15.2	7.7	12.4	24.8	18.0	9.5	13.6
Bone	4.9	4.3	6.1	4.4	5.1	4.0	4.4	4.7	5.7	4.4	5.8	4.5	5.2	4.2	5.0	4.9	4.7	4.8
Clear plate																		
Fat	89.9	92.8	91.1	90.4	91.7	92.6	91.5	90.5	90.9	89.3	92.1	94.5	90.3	92.2	93.5	89.1	91.0	91.4
Skin	9.3	7.6	9.3	9.6	8.7	7.4	8.5	9.1	9.4	10.7	8.8	6.1	9.7	7.8	6.5	10.9	9.3	8.7
Picnic																		
Lean	66.5	64.8	59.4	66.9	58.1	62.6	57.3	55.8	54.6	60.7	62.4	52.4	63.3	53.7	58.9	57.4	53.4	59.3
Fat	17.2	17.1	19.0	16.8	22.4	20.1	23.1	24.7	23.1	22.1	19.6	30.8	18.7	28.3	23.8	23.3	29.9	22.4
Skin	3.2	4.2	5.0	3.2	3.1	3.9	4.0	4.5	3.8	3.6	3.3	3.5	3.7	3.1	5.1	4.0	3.1	3.8
Bone	12.6	14.4	16.3	14.0	15.1	13.9	15.2	14.9	12.9	13.6	14.9	13.2	14.2	14.5	13.4	13.8	13.7	14.2
Ham																		
Lean	64.2	67.3	63.7	65.3	63.7	61.2	63.0	60.5	56.9	65.8	63.2	57.1	64.2	61.4	59.6	63.1	59.1	62.3
Fat	22.9	19.5	19.2	21.9	23.0	26.2	23.3	24.4	30.9	23.7	24.8	30.6	23.3	27.0	28.2	25.1	28.0	24.8
Skin	2.9	3.2	4.5	2.7	3.4	2.6	2.7	3.2	2.3	2.3	2.0	3.0	2.7	2.2	2.4	3.4	2.7	2.8
Bone	9.7	10.1	12.3	10.3	9.9	9.4	10.4	11.2	9.1	8.7	9.9	9.3	9.1	8.7	10.1	8.5	9.6	9.8
Loin																		
Lean	70.2	65.7	60.7	64.4	63.5	65.2	63.6	66.0	66.2	70.6	66.3	61.3	65.9	60.1	58.9	63.3	62.9	64.4
Fat	12.3	16.7	18.2	19.0	18.6	17.0	18.7	15.1	18.2	14.9	16.8	19.3	15.7	23.2	24.3	20.5	18.4	18.1
Bone	17.1	16.6	20.8	16.8	17.6	17.0	16.8	18.7	16.0	14.9	16.2	18.7	17.9	17.9	16.5	16.5	17.0	17.2

TABLE 47.—*Concluded*

Hog No.	3b	10s	33b	36s	20b	2b	93b	30b	93s	40s	3s	6s	0s	30s	99s	90s	9b	Aver.
Fat back																		
Fat	87.7	91.0	86.6	90.6	90.3	92.6	91.3	89.9	91.8	91.5	90.7	91.4	87.0	91.3	91.6	90.9	91.2	90.4
Skin	12.3	9.1	13.7	9.6	10.1	7.4	8.7	9.7	7.8	8.3	9.3	9.0	13.1	8.8	8.4	9.1	8.6	9.6
Spareribs																		
Lean	61.9	59.3	53.3	64.3	63.4	60.5	68.4	59.5	67.6	63.8	61.6	72.2	63.6	62.5	66.8	69.2	71.4	64.1
Bone	40.5	40.2	45.3	35.7	36.1	43.7	32.4	40.9	38.5	36.2	36.9	28.7	35.6	36.1	34.1	30.8	38.1	37.0
Belly																		
Lean	43.9	55.2	51.9	50.9	33.7	55.6	41.6	42.4	31.8	44.9	45.4	39.4	46.0	37.9	41.9	46.4	44.8	44.3
Fat	49.6	39.4	40.2	44.0	59.5	38.9	53.5	51.1	63.1	50.1	48.2	55.7	47.9	53.3	53.2	48.7	50.2	49.8
Skin	6.3	5.6	7.4	6.0	6.2	5.6	4.9	6.0	4.3	5.3	6.5	5.1	5.9	5.6	5.3	5.9	5.4	5.7
Trimmings																		
Lean	30.9	18.5	30.3	26.3	15.6	26.4	21.9	18.9	13.5	20.6	22.7	17.3	26.1	14.7	11.3	20.2	15.0	20.6
Fat	57.4	70.9	53.8	61.9	70.6	63.5	67.8	69.3	78.3	71.1	69.6	72.3	62.7	76.4	80.3	69.9	74.5	68.8
Skin	10.4	9.2	14.2	9.8	11.2	8.9	9.0	10.4	6.6	7.7	6.4	8.9	9.0	7.2	8.0	8.7	8.7	9.1
Bone	1.4	1.5	2.1	1.4	2.6	1.3	1.3	1.1	1.8	1.1	1.0	1.1	1.9	1.1	1.1	1.6	1.3	1.5

TABLE 48.—PHYSICAL COMPOSITION OF CARCASSES OF INTERMEDIATE AND RANGY HOGS, 225-POUND WEIGHTS: THIRD EXPERIMENT
(Expressed in percentage of carcass weight)

Intermediate					Rangy				
Hog No.	Lean	Fat	Skin	Bone	Hog No.	Lean	Fat	Skin	Bone
Hand-fed individually in dry lot									
10b	45.3	36.5	6.1	11.5	2s	45.2	36.0	5.9	12.8
13b	45.0	36.5	4.7	11.9	16s	46.2	34.5	6.1	12.5
2b	47.1	35.0	5.2	12.4	5b	46.7	32.8	6.0	13.8
7b	41.7	41.1	5.0	11.8	19b	45.1	32.9	5.8	14.3
16b	42.7	39.1	4.7	12.7	4b	44.5	36.2	6.1	15.3
15b	45.9	39.5	3.8	11.2	7b	47.5	32.8	5.9	14.2
14b	46.5	35.5	4.7	14.1	13s	49.3	32.3	5.5	14.4
9s	48.4	33.2	5.8	13.4	3s	46.2	33.5	4.9	17.1
1b	44.7	35.9	6.0	15.0	12s	46.5	32.9	5.8	14.3
3b	41.4	38.4	6.2	15.1	18b	43.5	34.9	6.0	17.2
17b	47.9	33.6	4.9	14.9	6b	44.5	35.7	5.7	14.7
20s	46.8	33.7	5.5	15.4	17s	47.4	31.8	6.3	15.4
11b	46.9	32.9	5.8	15.7	14b	43.2	34.6	6.6	16.6
4s	47.5	30.1	6.3	17.4	9s	48.3	32.9	5.3	14.1
12s	43.3	36.4	5.7	14.8	15s	47.7	32.2	5.3	14.4
19b	43.8	37.3	5.5	14.0	10s	52.1	26.2	6.4	15.1
5s	42.1	38.1	5.5	14.2	20s	51.9	28.4	5.8	13.7
11s	49.8	29.9	5.9	13.8					
Average	45.4	35.7	5.4	13.9	Average	46.8	33.0	5.8	14.7
Self-fed on alfalfa pasture									
99b	45.6	37.3	4.8	12.1	3b	46.1	35.3	5.6	12.7
39b	42.1	42.7	4.9	11.0	10s	46.0	35.2	5.3	13.3
0s	48.9	35.2	4.8	11.8	33b	43.3	33.3	7.6	15.3
6b	41.0	41.3	5.1	11.6	36s	46.1	36.0	5.1	12.5
70b	45.7	36.5	5.8	12.0	20b	40.6	40.5	5.4	12.4
3b	38.5	45.5	4.6	11.1	2b	42.7	40.5	5.0	11.6
80b	38.1	43.4	5.0	13.0	93b	41.5	39.7	4.8	13.0
9s	45.7	37.0	5.0	11.0	30b	40.9	39.5	6.0	13.3
99s	39.4	43.5	4.5	12.4	93s	37.9	45.4	4.7	11.3
20b	41.9	41.2	5.1	12.1	40s	45.1	38.7	5.0	11.1
29b	40.4	43.0	4.3	11.5	3s	44.3	38.6	4.5	12.3
0b	36.4	46.6	4.4	11.7	6s	37.0	46.6	4.9	11.1
96b	41.1	42.0	4.3	12.3	0s	46.5	35.2	5.2	12.7
96s	38.5	43.8	4.8	12.1	30s	39.5	43.7	4.5	11.6
90b	41.6	41.1	4.6	12.3	99s	38.0	46.0	4.8	11.7
93b	35.5	48.7	5.6	9.9	90s	42.0	40.5	5.6	12.2
63b	40.5	42.3	5.3	11.3	9b	39.7	43.1	5.3	11.7
66s	41.5	41.2	5.6	11.7					
Average	41.2	41.8	4.9	11.7	Average	42.2	39.9	5.3	12.3

GRADING OF CARCASSES

The grading of the carcasses was quite unsatisfactory due to poor refrigeration during a considerable part of the experiment and the illness of the investigators during the latter part of the experiment. In the former investigations it was found that carcasses containing 37 percent or more fat were usually finished, while those containing less than 37 percent were usually unfinished. Judged by this standard, 6 of the 18 Intermediate hogs hand-fed in dry lot were finished at 225 pounds, while none of the 17 hand-fed Rangy hogs was finished at this weight (Table 48). Of the hogs self-fed on alfalfa pasture, 16 of the 18 Intermediate hogs were fat enough and 12 of the 17 Rangy hogs were finished at 225 pounds. Of the self-fed hogs, 15 Intermediate carcasses were graded "smooth" and 3 were faulted as being a trifle rough. Twelve of the 17 Rangy carcasses were criticized as being too rough.

The grading of the hand-fed hogs (many of which were slaughtered during the illness of the graders) was quite incomplete. Eleven Intermediate carcasses were graded as rough, 3 as smooth, and 4 were ungraded. Eight of Rangy carcasses were graded as rough, 2 as smooth, and 7 were not graded.

GRADING OF CUTS

A ham, a belly, and a picnic from each carcass were cured and smoked. The cured cuts were then graded by an expert from Swift and Company. Inasmuch as the picnic is a cheap cut, the trade is not very particular regarding it. In fact, the expert stated that all picnics were good enough for the No. 1 grade altho some were better than others. Hams and bacon were graded as No. 1, 2, or 3.

Hogs Hand-Fed in Dry Lot. All the Intermediate and all the Rangy hams were graded as No. 1 (Table 49). The grader criticized 3 of the Intermediate hams as too long in the shank and 1 as not fat enough. Six of the Rangy hams were faulted as too long in the shank, 1 as containing too much bone, and 1 as not enough fat.

Eight of the Intermediate picnics and 14 of the Rangy picnics were faulted as too long in the shank. Fifteen of the Intermediate bellies were graded as No. 1, and 3 as No. 2. Of the latter, 2 were faulted as too thin and 1 as too fat. Eleven of the Rangy bellies were graded as No. 1, 5 as No. 2, and 1 as No. 3. The No. 3 belly was too thin and lacked quality. Three of the No. 2 bellies were too thin, a fourth was "seedy," and the fifth was soft.

Hogs Self-Fed on Pasture. Fifteen of the Intermediate hams were graded as No. 1 and 3 as No. 2. Two of the No. 2's were soft and one was too fat. One of the No. 1 hams was too fat and another was too long in the shank. Ten of the Rangy hams were graded as No. 1 and

TABLE 49.—GRADES OF CUTS OF CURED MEAT FROM INTERMEDIATE AND RANGY HOGS HAND-FED INDIVIDUALLY IN DRY LOT, 225-POUND WEIGHTS: THIRD EXPERIMENT

Hog No.	Ham	Picnic	Bacon
		Intermediate	
10b	No. 1	No. 1	No. 2, thin
13b	No. 1	No. 1, fair quality	No. 1
2b	No. 1, prime	No. 1, fair quality	No. 1
7b	No. 1, not fat enough	No. 1	No. 1
16b	No. 1	No. 1	No. 1
15b	No. 1	No. 1, fair quality	No. 1
14b	No. 1	No. 1, fair quality	No. 1
9s	No. 1, very good	No. 1	No. 1
1b	No. 1	No. 1, long shank	No. 1
3b	No. 1	No. 1, long shank	No. 1
17b	No. 1	No. 1, long shank	No. 1
20s	No. 1	No. 1, long shank	No. 2, too fat
11b	No. 1, very good, long shank	No. 1, shank 1 inch too long	No. 1
4s	No. 1, long shank	No. 1, long shank	No. 2, trifle thin, quality good
12s	No. 1, long shank	No. 1, long shank	No. 1, very good
19b	No. 1	No. 1	No. 1, trifle thin
5s	No. 1	No. 1, long shank	No. 1
11s	No. 1, very good	No. 1	No. 1
	Total, 18 No. 1	Total, 18 No. 1	Total, 15 No. 1, 3 No. 2
		Rangy	
2s	No. 1, perfect	No. 1, fair quality, long shank	No. 1
16s	No. 1, not fat enough	No. 1, fair quality	No. 1
5b	No. 1	No. 1, long shank	No. 2, soft, poor quality
19b	No. 1, long shank	No. 1, fair quality	No. 3, thin, poor quality, breaks apart
4b	No. 1	No. 1, long shank	No. 1
7b	No. 1	No. 1, long shank	No. 1
13s	No. 1	No. 1, long shank	No. 2, seedy
3s	No. 1, long shank	No. 1, long shank	No. 2, too thin
12s	No. 1	No. 1, long shank	No. 2, thin, seedy
18b	No. 1, very good	No. 1, shank 1 inch too long	No. 1
6b	No. 1	No. 1, shank ¾ inch too long	No. 1
17s	No. 1	No. 1, shank 1¾ inches too long	No 1
14b	No. 1, long shank, big bone	No. 1, shank 1 inch too long	No. 1, excellent
9s	No. 1	No. 1, shank 1 inch too long	No. 1
15s	No. 1, long shank	No. 1, long shank	No. 1
10s	No. 1, very good, long shank	No. 1, very good	No. 1, trifle thin
20s	No. 1, very good, long shank	No. 1, very good, long shank	No. 2, too thin
	Total, 17 No. 1	Total, 17 No. 1	Total, 11 No. 1, 5 No. 2, 1 No. 3

7 as No. 2. Two of the No. 2's were turned down because the bone was too large, one of these also being soft. Another ham was turned down as soft. Four hams were graded No. 2 because of long shanks, one of these also being criticized as "staggy." Four of the No. 1 hams were faulted as too long in the shank (Table 50).

TABLE 50.—GRADES OF CUTS OF CURED MEAT FROM INTERMEDIATE AND RANGY HOGS SELF-FED ON ALFALFA PASTURE, 225-POUND WEIGHTS: THIRD EXPERIMENT

Hog No.	Ham	Picnic	Bacon
		Intermediate	
99b	No. 1	No. 1	No. 2, too fat
39b	No. 1	No. 1	No. 1
0s	No. 1	No. 1, soft	No. 2, soft
6b	No. 2, soft, poor quality	No. 1, fair quality	No. 1 trifle fat on shoulder
70b	No. 2, soft	No. 1, fair quality	No. 2, soft
3b	No. 1	No. 1	No. 2, too fat
80b	No. 1, long shank	No. 1	No. 1
9s	No. 1	No. 1, fair quality	No. 1
99s	No. 2, too fat	No. 1, little soft	No. 2, too fat
20b	No. 1	No. 1, long shank	No. 1
29b	No. 1	No. 1, little soft	No. 3, very soft, too fat
0b	No. 1	No. 1, soft, poor quality	No. 2, too fat
96b	No. 1	No. 1, poor quality	No. 2, too fat
96s	No. 1	No. 1	No. 2, soft
90b	No. 1	No. 1	No. 2, soft
93b	No. 1, too fat	No. 1	No. 1
63b	No. 1	No. 1	No. 1
66s	No. 1	No. 1, trifle soft	No. 1, prime
	Total, 15 No. 1, 3 No. 2	Total, 18 No. 1	Total, 8 No. 1, 9 No. 2, 1 No. 3
		Rangy	
3b	No. 2, soft, big bone	No. 1, soft	No. 2, soft, too fat
10s	No. 2, soft	No. 1, soft	No. 1
33b	No. 1	No. 1	No. 2, soft
36s	No. 2, long shank	No. 1	No. 1
20b	No. 2, long shank	No. 1	No. 2, yellow, poor texture
2b	No. 2, staggy, tough skin long shank	No. 1	No. 1
93b	No. 1, too long in shank	No. 1	No. 2, too fat
30b	No. 1, staggy, long shank	No. 1	No. 3, very soft
93s	No. 1	No. 1	No. 1
40s	No. 1, long shank	No. 1, poor quality	No. 3, very soft
3s	No. 2, long shank	No. 1, soft, poor quality	No. 3, very soft
6s	No. 1	No. 1, soft	No. 1
0s	No. 1	No. 1, fair quality	No. 2, too thin, no body
30s	No. 1	No. 1	No. 1
99s	No. 1, long shank	No. 1	No. 1
90s	No. 1, perfect	No. 1, long shank	No. 1
9b	No. 2, large bone	No. 1	No. 1
	Total, 10 No. 1, 7 No. 2	Total, 17 No. 1	Total, 9 No. 1, 5 No. 2, 3 No. 3

All the picnics of both types were graded No. 1. Five of the Intermediate picnics were faulted as soft, 1 as too long in the shank and 2 as lacking quality. Four of the Rangy picnics were soft, 1 was too long in the shank, and 2 lacked quality.

Eight Intermediate bellies were graded as No. 1, 9 as No. 2, and 1 as No. 3. The latter belly was too fat and soft. Five of the No. 2 bellies were too fat, and the other 4 were soft. Nine of the Rangy bellies were graded as No. 1, 5 as No. 2, and 3 as No. 3. The No. 3 bellies were all too soft. One of the No. 2 bellies was too thin, 2 were too fat, 1 of them also being soft; another was soft, and 1 was yellow and had poor texture.

SUMMARY AND CONCLUSIONS

In this investigation hogs of Very Chuffy, Chuffy, Intermediate, Rangy, and Very Rangy types were studied from the standpoint of the desirability of the pork produced by them. The experiments covered a period of three years (1922 to 1925) and included the study of the carcasses and cuts of a total of 189 hogs slaughtered at 175 pounds, 225 pounds, and 275 pounds. Some of the hogs were hand-fed individually in dry lot, some were self-fed in dry lot, and some were self-fed on alfalfa pasture.

Dressing Percentages. The hogs of the Very Chuffy type dressed somewhat higher than the hogs of the Intermediate and Rangy types when slaughtered at 175 pounds. There were no significant differences in the dressing percentages of hogs of different type similarly fed and slaughtered at 225 pounds or 275 pounds except that the dressing percentage of the Very Rangy hogs was somewhat lower.

Carcass Measurements. Various carcass measurements showed that length of carcass, length of head and neck, and length of legs varied with type, the Very Chuffy carcasses being shorter and having shorter legs, heads, and necks than the Chuffy carcasses, which were shorter than the Intermediate, which, in turn, were shorter than the Rangy. The Rangy carcasses were shorter than the Very Rangy. Apparently type had little or no effect upon the depth of chest. Length of body proper seemed to vary with the different individuals rather than with type.

Cutting Percentages. In the first and second experiments, when there were distinct differences between types, the carcasses of the Very Chuffy, Chuffy, and Intermediate types which were hand-fed in dry lot contained higher percentages of the fat cuts, such as leaf, fat back, clear plate, and belly, than the Rangy type similarly fed. In the Rangy type the feet and picnics made up a larger percentage of the weight of the carcass than in the case of the other types. When self-

fed in dry lot, the percentages of feet and picnics in the Very Rangy carcasses were greater than in the carcasses of the Intermediate type, and the percentages of leaf, fat backs, and clear plates were less. There was but little difference in cutting percentages between the Chuffy, Intermediate, and Rangy types when self-fed in dry lot. In the experiment of the third year, when differences between types were not so pronounced, there were no differences in cutting percentages.

Physical Composition of Carcasses. In the case of the hogs hand-fed in dry lot the percentages of lean in the carcasses of the Chuffy, Intermediate, and Rangy types were practically the same, the Very Chuffy carcasses containing less than the others. When the hogs were self-fed, there was no difference in the lean content of the Chuffy, Intermediate, and Rangy types. The Very Rangy carcasses contained a little more lean than the other types. When the hogs were hand-fed, the Very Chuffy and Chuffy types contained more fat and the Rangy type contained less fat than the Intermediate type. When the hogs were self-fed, there was no difference in fat content of the Chuffy, Intermediate, and Rangy types. The Very Rangy type, however, had considerably less fat than the other types.

When the hogs were hand-fed to 225 pounds, the Very Chuffy and Chuffy types contained less skin and the Rangy type contained more skin than the Intermediate type. When the hogs were self-fed, differences in skin content of the Chuffy, Intermediate, and Rangy carcasses were small. However, the Very Rangy carcasses contained considerably more than those of other types. When the hogs were either hand-fed or self-fed, the Very Chuffy carcasses contained less bone than the Chuffy and Intermediate, and the Rangy carcasses contained more bone than the Chuffy and Intermediate. The differences, however, were not so great when the hogs were self-fed as when they were hand-fed. The Very Rangy carcasses contained considerably more bone than the carcasses of the other types.

Grade of Carcasses. When hand-fed, the hogs of the Very Chuffy type finished before reaching the market weight of 225 pounds. Most of the Chuffy and Intermediate hogs were finished but not too fat at this weight. Most of the Rangy hogs were not finished at this weight, and many of the Rangy carcasses were too rough. When self-fed, the Chuffy hogs were finished at 225 pounds, some of them being overdone. The Intermediate hogs were usually finished but not too fat at this weight. Many, but not all the Rangy hogs were finished at this weight. Self-feeding improved the quality of the carcasses of the Rangy type. The hogs of the Very Rangy type did not finish at 225 pounds, and most of the Very Rangy carcasses were too rough.

Grade of Bellies. Many of the bellies of the hand-fed Very Chuffy and some of the bellies of the hand-fed Chuffy hogs killed at 225

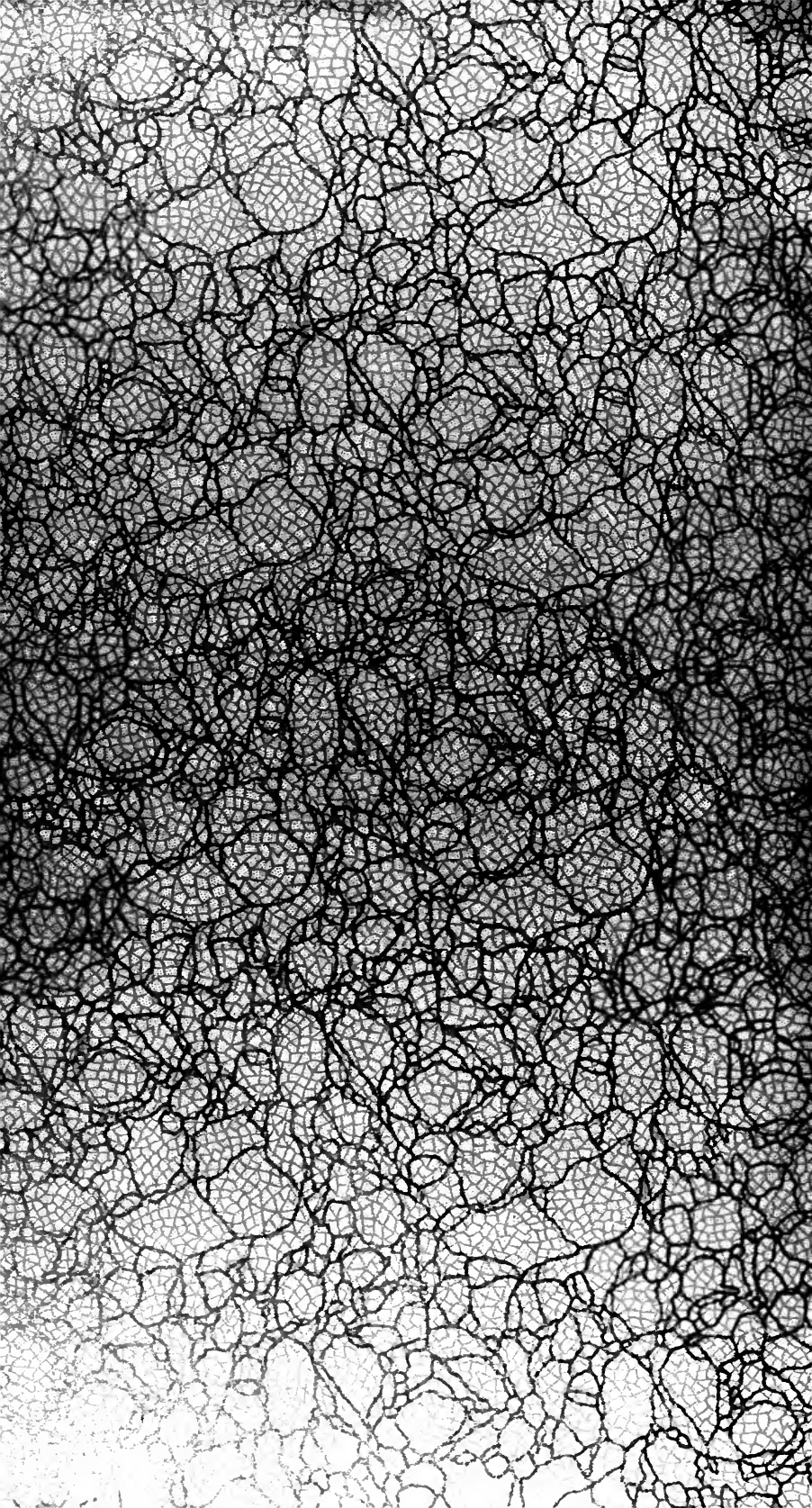
pounds were too fat. Many bellies of the self-fed Chuffy hogs were too fat; they were usually very smooth. Most bellies of the Intermediate hogs, either hand- or self-fed, were about right in finish and had good quality. Many bellies of the hand-fed Rangy type were unfinished and lacked quality. However, when this type was self-fed, more of them were finished. Very Rangy bellies were generally unfinished and lacking in quality.

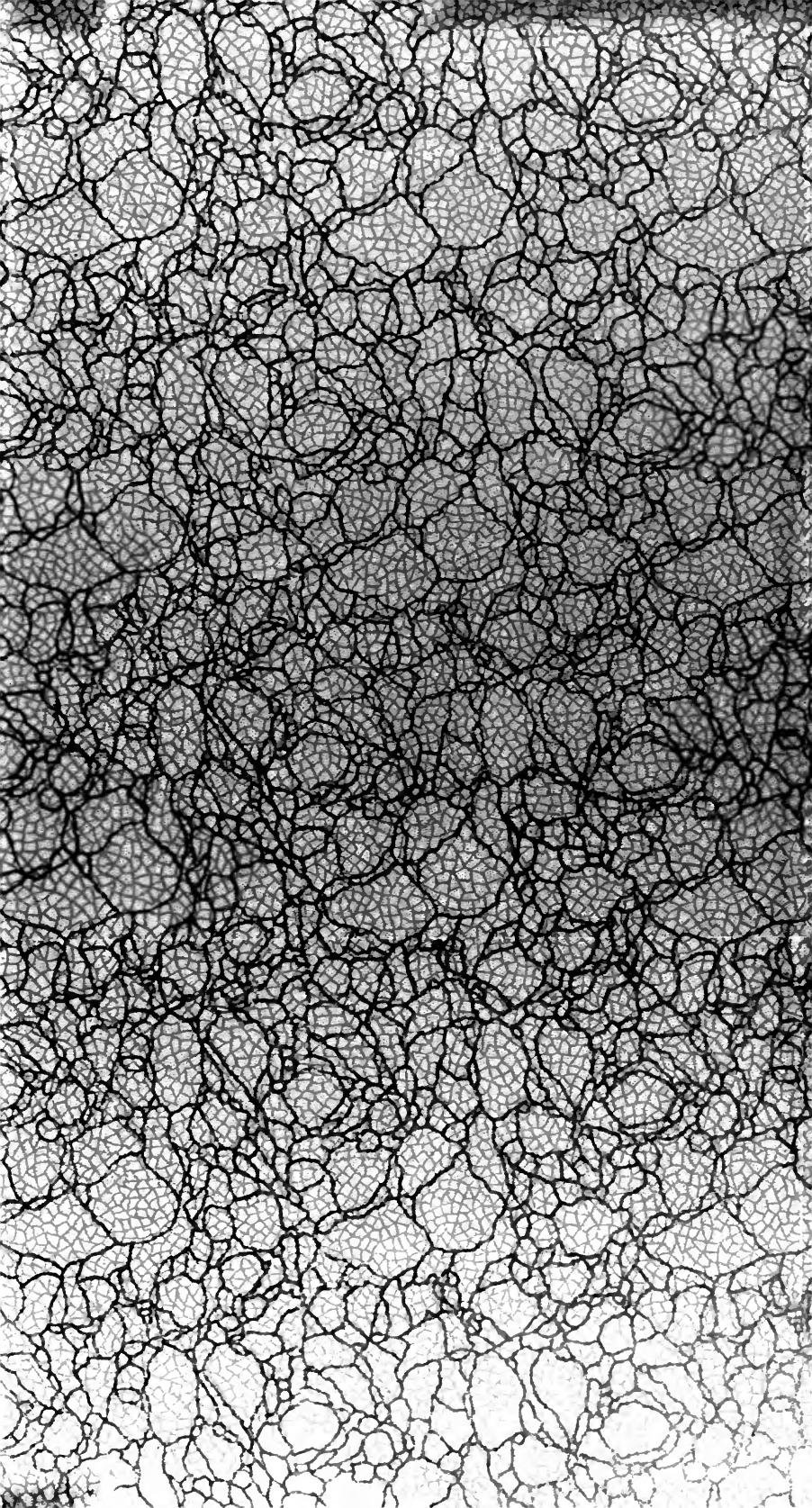
Grade of Hams. The hams of the Very Chuffy and Chuffy hogs were short in the shank and excellent in form. Many of them were too fat for "regulars." Hams from the Intermediate hogs were excellent in form and finish. Hams from the Rangy hogs were often too long in the shank for the first grade, and many of them contained too much bone. Hams from the Very Rangy hogs were long in the shank, thin, unfinished, and heavy-boned.

Grade of Picnics. The picnics of all types except the Very Rangy were good enough for the first grade. However, the shanks of the Rangy type were considerably longer than the shanks of the other types.

Quality of Other Cuts. The quality of the other cuts was not affected materially by the type of the hog.

Intermediate Type the Most Desirable. From the butcher's standpoint, the Intermediate type, either hand- or self-fed, proved the most desirable of the different types studied. The Rangy type, however, was quite acceptable if self-fed.





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